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**SATISFACTION WITH TIME USE AND ITS
RELATIONSHIP WITH SUBJECTIVE WELL-BEING**

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**Thesis submitted for the degree of Doctor of Philosophy
in Psychology**

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ABSTRACT

Much research on time use has been based on assumptions about clock and calendar time. Less is known about how people experience their time use, what makes people satisfied with their time use and about the nature of the relationship between the use of time and well-being. This thesis addressed these questions through literature reviews of well-being and time-use and two empirical studies.

The first study employed a qualitative design using semi-structured in-depth interviews with 21 purposefully selected participants. Interpretative Phenomenological Analysis (IPA) was used to analyse the data. The ten super-ordinate themes that emerged from the data as contributing to satisfaction with time use were allocated into four overarching categories: Motivation, Organisation, Execution and Evaluation.

The objectives of the second quantitative study were to investigate if key themes identified in the previous study would be replicated with a larger sample and to examine relationships between satisfaction with time use, subjective well-being, and locus of control. The study employed a survey design using postal questionnaires, completed by 173 randomly selected Open University students. A factor analysis of the time use questionnaire produced four factors: *liking what one does and perceiving it as worthwhile; balance; achievement and responsibility; time anxiety and lack of control*. These factors accounted for 40% of the variance in satisfaction with time use. Satisfaction with time use was also found to correlate significantly with various well-being measures.

The studies highlighted a number of factors contributing to satisfaction with time use previously ignored or under-researched in the time use literature, including motivation for time use activities, perceived balance in time allocation, taking responsibility for one's time, and the sense of achievement. The findings suggest that in terms of satisfaction with time use, time use interventions might be more helpful if focused on psychological aspects of time use, and less on time management techniques.

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Ilona Boniwell

April 2006

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CHAPTER 1: INTRODUCTION AND OVERVIEW

1.1. Time in our lives

The last hundred years or so have seen an unprecedented development of technology and economic growth leading to the satisfaction of many basic needs, at least in Western societies, yet the experience of time and its scarcity has not seemed to follow this trend. In fact, quite the opposite, the feelings of time scarcity appear to have intensified (Robinson and Godbey, 1997). Time has become an organising framework of our lives, both in terms of synchronisation of activities between individuals and distribution of activities in one's own life. Yet this framework can be seen as both a scaffolding and a restraint. Far beyond being merely an abstract idea or a subject for reflection, time has grown into a pressing force. Everyday language offers many examples of a common experience of time scarcity:

'I am sorry it took so long to reply to your email'

'I never seem to have enough time to complete my work'

'I don't even get time to think'

'I need more hours in the day...'

'What did I do today, where did my time go'?

This list is endless. The concept of *time famine* has become a familiar slogan in both academic literature and popular media (Banks, 1983). *Time crunch*, the feeling of being rushed all the time (also termed time urgency, time addiction, hurry sickness or time pressure) was experienced as a daily phenomenon by 34% of respondents in the 1995 Americans' Use of Time Project, with 61% of participants reporting never having excess time (Robinson and Godbey, 1997). A large proportion of time use survey respondents state that time is a bigger problem for them than money (Graham and

Crossan, 1996). 86% of UK female workers say they never have enough time to get things finished, while 59 % of population report suffering from stress (to which time anxiety is a contributing factor) (Mulgan and Wilkinson, 1995). Zuzanek (2004) demonstrates a robust correlation of 0.49 between feelings of time pressure and psychological stress. Stress is said to be undermining performance in 90% of UK companies, costing up to £5 billion and causing 13 million days sick leave every year (Green & Skinner, 2005).

Robinson and Godbey (1997) write: "Time has become the most precious commodity and the ultimate scarcity" (p.25). Issues that reoccur in surveys include the lack of leisure time, the demands of jobs that require more than full-time commitment, the guilt of parents about the quality and quantity of time spent with children, and failed attempts to find a balance between family and work needs (Daly, 1996). In Britain, a 1995 poll of workers showed that over 70% wanted to work 40 hours or less per week, while only 40% did. 31% of full-time workers felt dissatisfied about the impact of their working hours on family and leisure (Mulgan & Wilkinson, 1995). These feelings of dissatisfaction are particularly prominent with regard to not being able to vary the pace of one's life and not feeling that time is under one's own control (Winkfield, 1995). Women especially often report wanting more autonomy and control over their time and more time for themselves (Samms, 1995).

Time management has grown to be a catch phrase in Western societies, with thousands of books, seminars and advertisements available on the topic. Yet, mastering time management techniques seems to help surprisingly little in reducing time pressure (Macan, 1994, see section 2.3.2 for a further discussion of her findings). Daly (1996) observed: "Time management does little to change the intoxicating effects of a fast-paced culture; it simply serves as a tool for living with the malaise" (p.210). Some believe that time management programmes rarely achieve their objectives, because what they teach is based on the wrong principles (Elliot, 1997).

The answer to this time scarcity problem seems simple on the surface. Surely, an increase in free time would relieve the pressure and release people from the temporal imprisonment in which they find themselves. Interestingly, social scientists studying time use patterns have discovered that over the last 150 years overall working time has steadily decreased. A full-time employed man born in the mid-nineteenth century spent about 30% of his life in paid work in comparison with 10% of the lifetime of a man born in the mid-twentieth century (Mulgan and Wilkinson, 1995). These figures can be explained, in part, by a longer life expectancy leading to a longer retirement, but also by a shortened working week in the twentieth century. In the last four to five decades alone we have, on average, gained between 5 and 7 free hours a week (Robinson and Godbey, 1997; Pentland et al, 1999). Although there are conflicting opinions on this point (the most notable being that of Schor, 1991) and also some indications that working time slightly increased again in the 1990s, most time use surveys suggest that the time devoted to work has declined, whilst the respondents themselves believe that it has increased. This reveals a rather curious relationship between use and perception of time that will be examined in more detail in the next chapter.

Having time to spare is associated with paradoxical findings. Even though people are desperate for more free time, when they get it, they sometimes do not know what to do with it. Mulgan and Wilkinson (1995), for example, argue that retirement may bring with it a sense of isolation and depression, unemployment is associated with a significant decrease in well-being, mainly through loss of income and structure to the day (Jahoda 1981, Bond and Feather, 1988), and few find their leisure time very satisfying. Leisure time (usually assumed to be superior to work time and associated with happiness, Lane, 1995) is characterised by two tendencies – increase in passive leisure and intensification of time devoted to active leisure. First of all, increases in free time have been found to be largely devoted to television viewing, even though it's rated relatively low in terms of pleasure and was found to be associated with boredom by

some researchers (Csikszentmihalyi, 1992), though not all (Haworth, 1997). While nearly a third of all free time (in average three hours per day) is reported as being spent in front of the television (Tyrrell, 1995), significantly less time is spent engaging in activities usually rated as the most pleasurable, such as socialising and outside activities. However, when people do engage in active leisure, it often becomes subject to the phenomenon of *time deepening* – cramming a larger number of activities into a shorter amount of time. Time deepening assumes that it is better to do as many activities as possible within a given amount of time, rather than following an “either-or” principle and engaging in one activity only. Time deepening is achieved by speeding up activities, choosing the activities that can be done quickly over those which take more time, doing more than one thing at once and deciding on leisure activities with regard to how much time is going to be spent. This phenomenon can be paralleled with the maximisation tendency, described by Schwartz (2004) as one of the modern evils. While time deepening may have some advantages in terms of accomplishment, it can result in feelings of fragmentation and time strain (Robinson and Godbey, 1997). Russell wrote: “To be able to fill leisure intelligently is the last product of civilization, and at present very few people have reached that level” (cited in Lane, 1995, p.16).

The realities of time are multiple, ranging from the widespread experience of scarcity to the perhaps no less stressful experience of time abundance, from treating free time as precious to wasting it in an unprecedented manner. One problem, however, may be argued to lie in the heart of these diverse experiences, and this is what will be considered next.

1.2. The time use problem

Given a choice of whether to work more, have less free time and spend more, or work less, have more free time and spend less, the first pattern seems to be the preferred one for most people (Lane, 1995). Accordingly, speed, efficiency and productivity have

become our dominant values both at work and at home (Rifkin, 1987). At work, the ability to use time efficiently, to produce an outcome with a minimal waste of time, is seen as an important skill (Kelly, 2003a). Garhammer (2002) points at the increased pace of work, which displays itself by doing things faster (acceleration) and compressing actions (making a phone call while having lunch). Several studies acknowledged time pressure among employees (e.g., Jackson & Martin, 1996; Major, Klein, & Ehrhart, 2002; Teuchmann, Totterdell, & Parker, 1999). Despite some literature on the merits of downsizing and some organisations encouraging employees to take all their holiday and not work too long hours (Henry, 2004), the speed and efficiency trends appear to dominate the work market. Tyrrell (1995) also notes that the feeling of being “busy” is no longer limited to the work setting and has been incorporated into the leisure schedules which too have become subject to time planning and another field for exercising productivity. Time deepening, which has been examined above, means that the maximum benefits are extracted in the minimum amount of time. Therefore even during free time, there is a tendency to reproduce the time-intensive patterns developed in work situations. (Banks, 1983). Widespread involvement in multiple roles, also contributes to the perceived scarcity of time in each of those roles (Fried and Slowik, 2004). Thus, although lifetime working hours may have fallen by 42 percent over the last century, more people are suffering from stress due to intensification of both work and leisure.

There is a balance point beyond which pressure is counterproductive. Exhaustion can result in an inability to engage with life, which may explain why the largest proportion of free time is spent in passive, unsatisfactory, low-pleasure activities. Other consequences of pressure are a loss of feeling in charge of one’s own time, being driven by it, and not feeling happy with the way time is used. Mulgan and Wilkinson write: “...most work and leisure is not used well, whether the goal is happiness or personal development” (1995, p.10).

It might be that the problem in relation to time use lies not in the amount of time available, not even in having to manage it successfully in order to squeeze out an extra hour from a day, but in learning how to balance time in such a way that it contributes to one's well-being and satisfaction with life. Only very limited support was found for positive effects of the current time management programmes on well-being (Claessens, 2004), so more time management, which aims to increase efficiency and productivity is unlikely to solve this problem. We are already highly productive: today, an hour's work is worth 25 times more than in 1830 in terms of what is being produced (Mulgan and Wilkinson, 1995). Whilst undoubtedly most of these increases in productivity can be explained by the increased sophistication of technology, personal efficiency and the speeding up of the work process are also likely to play a role in these recorded increases in productivity.

Thus the main problem that this PhD attempts to address is not how to use time to be more productive, but how to use time to feel more satisfied, both with time use itself and with life in general. A quote from Mulgan and Wilkinson reflects this challenge well: "If the 20th century was about money – making it and distributing it – the evidence from values surveys and systems analysis, economics and psychology suggests that the 21st will be about time, and how to use it to achieve well-being" (1995, p. 11). Despite much rhetoric in the media and identification of the problem in academic books, little is known about what makes people satisfied with their time use or about the relationship between time use and well-being¹. The current research aims to fill this gap by using qualitative and quantitative methods of psychological inquiry.

The author's own interest in this topic comes both from an awareness of this issue in a wider social context and also from wanting to find an answer for herself. Having to balance work, study, family life and leisure interests for many years; she endeavoured to understand what makes a difference between being satisfied with her

¹ Terms such as satisfaction, well-being and happiness will be defined later in this chapter and in the course of the literature review.

time on some occasions and feeling totally overwhelmed and out of control at other times. Why is it and how is it some people seem to be highly productive in their professional lives and yet find enough time for themselves, for their children and loved ones? Is there a way to achieve and retain a feeling of satisfaction with time in a situation of high time pressure? With respect to the above issues, the author concludes that this PhD has helped her to find and implement the answers in her own life.

1.3. Primary research questions

The following questions were the starting point of this thesis: What helps people to feel satisfied with their time use? How can time be used so that it contributes to one's well-being? How can the experience of time pressure/anxiety be avoided so that time is no longer perceived as an enemy? How can one find a balance between work and leisure and satisfaction in both? They contributed to the identification of the primary research questions for this PhD, which were originally formulated as follows:

1. What is the basis for feeling satisfied with time use?

1a. What factors contribute to feeling satisfied with time use?

2. Is there a relationship between use of time and well-being?

2a. What is the relationship between these two constructs?

These primary research questions were modified and expanded following the literature review, which had a significant impact on the original representation of the problem. The revised research questions can be found at the end of the third chapter.

1.4. Structure of the thesis

A brief overview of the thesis is presented below.

1.4.1. Chapter 2: Time use literature review

Three major databases – PsychInfo, Emerald and Dissertations and Theses (ProQuest) – were searched for relevant literature. In addition, other relevant publications were included that were known to the author.

The literature review focused on two areas: time use and well-being, and two separate chapters were devoted to these topics. For the time use literature review keywords searched included time use, time allocation, time structure/structuring, time management, satisfaction with time use and a combination of these terms with well-being. The time use literature review represents a cross-disciplinary inquiry including pertinent sociological, psychological, philosophical, anthropological and management literatures plus work on the social history of time. However, both studies in this thesis were conducted using methods commonly utilised in psychology.

In this chapter, two lines of time use research are contrasted: approaching time use objectively, i.e. through calculating daily time expenditure, and subjectively, i.e. relying on a person's own perception of their time use. Firstly, these approaches are located within the historical and philosophical perspectives on time, in order to demonstrate the origins of this debate. Anything more than a cursory review of historical, philosophical and current conceptions was beyond the scope of this thesis.

Secondly, the review addresses the objective approach to time use research, such as time diary studies widely used in social science, including their advantages and disadvantages. However, the review of methodology and concrete empirical examples demonstrate that the focus on objective time and its expenditure, rather than subjective time, gives a poor representation of a) objective outcomes of activities (e.g. exam grades or achievement of a desired outcome); b) psychological states; c) the meaning people assign to the ways they spend their time; d) the relationship of time use with constructs such as well-being.

The chapter goes on to focus on the subjective experience of time use. The subjective time use paradigm is considered most appropriate for the research questions because it deals with what people think and feel about their time use (whether they experience time pressure, time anxiety, feeling in control, satisfied or dissatisfied with their time), not only with what they actually do. Research reviewed here includes several qualitative studies of time use, time management studies and inventories of time use. It is concluded that although undoubtedly useful, these studies provide an incomplete and incoherent representation of satisfaction with time use and the factors that may comprise it. Finally, a relationship of time use with well-being within the subjective paradigm is considered. Existing research suggests that while there may not be a direct relationship between these constructs, a relationship between one's satisfaction with time use and subjective well-being is likely.

1.4.2. Chapter 3: Well-being literature review

For the well-being literature review the query terms included well-being, subjective well-being and happiness. It was not possible to examine all the relevant literature on this vast subject, thus more attention was paid to existing literature reviews and to empirical papers on well-being in relation to daily activities.

In order to answer the question “What is the relationship between time use and well-being”? we need to understand what is meant by well-being. However, answering this question is not straightforward. The chapter first considers the prevailing paradigm of subjective well-being, consisting of a cognitive part (represented by life satisfaction) and an affective part (represented by positive and negative affect). A distinction is also made between the notions of global and momentary well-being.

Next, some of the known correlates and predictors of subjective well-being are examined, including social relationships, personality factors, work, etc. It is noted that time use/management does not feature as a correlate of well-being in any major review.

Having briefly examined some of the theories of well-being, the next section explores the question of whether subjective well-being adequately represents what it means to be psychologically well. It appears that the notion of subjective well-being can be reduced purely to hedonic happiness, as it does not tackle questions of personal growth or meaningfulness, that seem paramount to a life well-lived. With that, a notion of eudaimonic well-being (i.e. concerned with growth and meaning) is introduced and the possibility of a relationship between time use and eudaimonic well-being is raised.

It transpires, however, that the notion of eudaimonic well-being is not without its own problems, one of which is the lack of consensus on what it actually entails. Moreover, both the hedonic and eudaimonic paradigms are open to the same criticism – both definitions have resulted from the development of measures that were data or theory driven, but not grounded in exploratory qualitative research. This is the reason why a brief review of qualitative research is included in the next part of the chapter. However, the scarce qualitative studies on well-being, although offering a few good pointers, leave the question of what is meant by well-being open and in need of further investigation. This is reflected in the addition of the question, on the meaning of well-being, into the revised research questions.

The final part of the chapter is devoted to the review of the literature concerned with life goals and well-being. Having come across this research area inadvertently during the well-being literature review, some of the findings appeared relevant to the problem of time use and well-being. Several pieces of research indicate that congruence between one's values, goals and their actions result in the experience of well-being. This conclusion was paralleled with findings from qualitative research on time use, and gave rise to new research questions about the impact of life goals-life congruence on one's satisfaction with time use.

Chapter 3 concludes with the expanded list of research questions, revised on the basis of the literature review.

1.4.3. Chapter 4: Methodology

The thesis is comprised of two consecutive studies, which utilise complementary research designs and methodologies. The first qualitative study aimed to explore participants' subjective experience of and satisfaction with time use and to explore the associations between the use of time and well-being, amongst other objectives. This was achieved through semi-structured in-depth interviews with 21 participants, 11 of whom were largely satisfied with their time use, and 10 of whom were largely dissatisfied with their time use. The theoretical approach and method of analysis used in the study was Interpretative Phenomenological Analysis, concerned with exploring personal experience and accounts of the phenomena.

Having examined in detail the necessary components of the methodological process such as sample selection and data collection tools and procedures, the chapter progresses onto a comprehensive discussion of how the quality of qualitative research can be judged, and the techniques used to check its reliability and validity.

The chapter then introduces the second study, which employed a postal questionnaire designed to test the factors contributing to satisfaction with time use that were derived from the first study, and to examine possible associations indicated in the research questions. The study adopted a cross-sectional approach to its target population (the Open University students) with random selection sampling. The questionnaires were sent to 400 students on all Open University courses and were returned by 173 respondents who completed the survey.

The postal questionnaire, which consisted of one researcher-designed questionnaire on satisfaction with time use and four well-known scales, is then examined in detail. Specifically, the process of construction of the 70-item questionnaire is outlined, including the modifications made following a pilot study. Sense of Coherence scale, Locus of Control scales, Satisfaction with Life scale and

PANAS scales utilised in the final questionnaire are discussed with reference to the research findings concerning their psychometric properties.

The chapter concludes with a brief summary of statistical methods of analysis utilised in the second study, which included factor, correlational and multiple regression analyses.

1.4.4. Chapter 5: Results from the 1st study

The objectives of the qualitative study were to explore people's subjective experience of time use, to identify the factors contributing to satisfaction with time use, and to explore associations between the use of time, well-being and life goals.

Emergent themes were identified from the interview data with the help of Interpretative Phenomenological Analysis (IPA) and grouped into ten super-ordinate themes: life goals and worthwhile activities, liking what one does, balance and variety of activities, prioritisation and acceptance of limits, time management mechanics, responsibility and control, discipline and adaptability, achievement vs. wasting time, reflection/evaluation, time anxiety and perspectives on time. These themes were then organised into four categories of Motivation, Organisation, Execution and Evaluation.

Two additional analyses were performed on the data set. The first evaluated the meaning of well-being for the participants. The second analysis was of the relationships between time use and well-being. The results of the first analysis made use of five super-ordinate themes to organise the data: state of body and mind, situation-related, self-actualisation, relationships and transcendence. The results of the second analysis suggested that satisfaction with time use and well-being are two correlated constructs, with participants' responses falling into three super-ordinate themes: relationship expressed in positive terms, relationship expressed in negative terms and time use as the means to an end.

1.4.5. Chapter 6: Results from the 2nd study

The rationale underlying the second study was to investigate whether the factors identified in the previous study are replicated with a larger sample and to see which ones carry more weight. The second objective was to examine the relationships between the variables of satisfaction with time use, subjective well-being, sense of coherence and locus of control.

The 70-item questionnaire on satisfaction with time use designed on the basis of the results from the first study, was subjected to principle component analysis with Varimax rotation (24 items were removed from the questionnaire as a result of data screening). It revealed four factors which explained 46% of the common variance: *liking what one does and perceiving it as worthwhile, balance, time anxiety and lack of control*, and *responsibility and achievement*. These four factors reflected six of the super-ordinate themes from the first study, although on some occasions the components were combined differently. All four underlying scales had good factor loadings and high reliability, suggesting that a reliable factor solution had been reached. The results of this principle component analysis, however, needs to be considered exploratory and limited to the current sample.

These four factors explained 40% of the variance in satisfaction with time use (measured through a single item question), which was established using the multiple regression procedure. Using the enter method, a significant model emerged.

Finally, the relationships between the variables of satisfaction with time use, well-being and locus of control were examined. Satisfaction with time use, as measured by the composite score of factors from the principal component analysis, has attracted moderate to high significant correlations with the measures of well-being. The single-item measure of satisfaction with time use attracted a similar pattern of correlations, albeit of a lesser magnitude. The relationships between internal/external loci of control and other variables were found to be very low, although mainly significant.

1.4.6. Chapter 7: Discussion and Chapter 8: Conclusion

Chapter 7 discusses the findings reported in the previous two chapters in relation to each other and with regard to existing knowledge examined in the literature review. A good correspondence was found between the findings from the first and the second studies, and the categorical structure of satisfaction with time use proposed as a result of the qualitative study, was supported by the quantitative study.

The discussion centres around the themes/factors upheld by both studies, including: *liking what one does and perceiving it as worthwhile*, the importance of perceived *balance* for satisfaction with time use, *achievement and responsibility*, as well as the feeling of *time anxiety and lack of control*. These factors are presented in a circular model that indicates relationships between them.

The importance of time management and congruence between one's life goals and life as lived are also considered, together with the emerging relationship between satisfaction with time use and well-being. Finally, five categories of meaning of well-being are suggested on the basis of the qualitative study and previous research findings.

Chapter 8 concludes that the current research sheds more light onto our understanding of the nature of satisfaction with time use by identifying a number of factors previously reported in the qualitative literature, but under-researched in the quantitative literature. It also sets out future research directions, which include development of the Satisfaction With Time Use Scale (accommodating factors identified in the current and previous research), further qualitative research on well-being and investigation of the relationships between time use and eudaimonic well-being.

1.5. Possible impact of current research

The current research could play a role in the development of scientific theory and knowledge within the fields of positive psychology and the psychology of time. It aims to be of practical significance to those who experience great demands and pressure on their time and are in search of more balanced and satisfactory time use. If, indeed, time is one of the major ways in which we organise ourselves in the world, a number of findings presented here could have a profound impact on someone's life.

In accordance to the premise set out in the introduction, the thesis supports the idea that time management techniques may not be the best way to make people happier with their time, partly because time management aims to maximise productivity rather than well-being. Although undoubtedly not the last word in research on the subject, the thesis substantiates the existence of the relationship between time use and well-being and identifies some of the factors that contribute to time that is used well. Having confirmed the importance of values-life congruence and its impact on satisfaction with time use, this research advocates that the emphasis be shifted away from promoting generalised time management techniques or time saving methodologies, to the programmes and interventions that help people identify their primary values and develop ways of living that are in accord with these. An understanding of what makes people really satisfied with the way they use their time can highlight the areas in individual psychological profiles that require further development (e.g. internal control or a sense of responsibility). Such a shift of emphasis may be an important step towards a prevention of occupational stress and solving the dilemmas of work-leisure balance.

1.6. Researcher's assumptions

Several assumptions and motivations of the researcher underlie the current thesis. This section intends to make them explicit.

1. Time use can be approached both as an objective reality, expressed through clocks and calendars, or as a subjective experience. The researcher's own preference and interest in time lie within the subjective domain.
2. Human beings assign meanings to their experiences and are capable of reflecting upon and describing those experiences and their associated meanings.
3. Although results from qualitative research are generally treated as subject specific and not generalisable to the wider population, the author believes that when similar findings are replicated in a number of qualitative studies with different groups of participants or with a large number of participants, in some circumstances this suggests generalisation akin to those frequently made on the basis of quantitative findings.
4. The author can describe herself as a white young woman of Eastern European origin, who is also a single parent of two boys. She tends to juggle a substantial number of projects simultaneously, including study, research, academic and popular writing, paid work, self-employment, committee memberships and contributing to the organisation of various events. Although generally judged as highly efficient and productive, the author occasionally finds herself under considerable time pressure. Although the author does not generally believe that these characteristics and activity patterns bear a substantial influence on the way she approaches her academic work, it is possible that this acknowledgement can reveal potential biases that have not been recognised by the researcher herself, and also explain the preferences for inclusion of certain literatures and for pursuing certain questions in more depth than others.

1.7. Definition of terms used in the thesis

Time crunch or *time famine* are the terms frequently used in academic literature and the media to refer to the feelings of being rushed all the time, to not being able to finish tasks within the time available, and to the lack of free or leisure time.

Time management is mainly concerned with dealing with individual time issues in the work setting. It refers to behaviours aimed at achieving an efficient and effective use of time. This concept does not commonly cover time use matters during leisure or other non-work situations, although it can be used with reference to balancing work and non-work time.

Time use is a notion somewhat broader than time management, because it deals with time issues across all categories of experience, including work, leisure, personal and other committed time.

Objective time use reflects allocation of time to activities, which can be measured in corresponding time units, allowing the calculation of overall daily time expenditure.

Perceived time use is a person's own subjective representation of their time use, which may or may not necessarily reflect objective or actual time allocation. The term "perceived time use" is used interchangeably with the terms "subjective time use" and "subjective experience of time use" in this thesis.

Satisfaction with time use refers to a feeling of being happy with one's time use or expenditure. It belongs to the subjective time use domain.

Subjective well-being is frequently used as a more scholarly version of the term happiness. It is believed to comprise both cognitive and affective aspects, and is usually measured through assessing one's cognitive satisfaction with life and their levels of positive and negative affect.

Satisfaction with life refers to the cognitive component of subjective well-being. It is the extent to which an individual judges their life as-a-whole favourably.

Positive and negative affect concern one's feelings and moods. Rather than regarding well-being as a balance between positive and negative affect, modern approaches to well-being view it as a combination of high positive and low negative affect.

Hedonic well-being/paradigm is synonymous with so-called traditional approaches to well-being, that are mainly concerned with measuring and evaluating happiness or subjective well-being.

Eudaimonic well-being/paradigm assumes a broader definition of well-being than the mere pursuit of happiness, and claims that well-being is found in the actualisation of human potential, growth and meaning.

Psychological well-being is the term used by Carol Ryff (e.g. 1989a) to describe a specific approach to well-being, defining it through the six components of: self-acceptance, personal growth, purpose in life, positive relations with others, environmental mastery and autonomy.

CHAPTER 2: TIME USE LITERATURE REVIEW

When time stands still it's really going.
It never speeds and never stops.
But time as lived, in human knowing
Seems to flow in streams or drops.

So you must ever keep in view
That time as lived and time in thought
May often seem as one to you,
But time and life the same are not.
(McGrath, 2004)

Time belongs to a handful of categories that are of truly universal concern (like space, symbol or cause). The majority of disciplines have addressed it. Philosophers, scientists, sociologists, anthropologists all have studied time processes in a multitude of ways. Until relatively recently, temporal matters have not received much attention from psychologists, but this pattern is now changing.

Although this research adopts a psychological approach to studying time use and its relationship with well-being, a more multidisciplinary perspective was taken in an initial literature review by examining the phenomenon from philosophical and historical perspectives. The first section aims to elucidate the origins of the debate which has informed very different approaches to studying time use, utilised subsequently by the social scientists. It considers whether time should be approached and treated as something objective, “out there”, existing independently from an observer, or as something subjective, psychological, shaped by personality and experience, involving multiple streams and cycles.

Next, the chapter will examine how the objective representation of time is reflected in the time use studies, carried out predominantly by sociologists. Advantages and major findings arising from these studies will be considered, along with their disadvantages and limitations which include, for example, a counterintuitive lack of a

relationship between time use and well-being. These considerations will have a direct impact on the research questions and on the methodology chosen for the thesis.

The following section will consider the research approaching time use from a subjective perspective, including qualitative studies on the subject, time management research and several time use inventories. Finally, a number of studies which evaluated the relationship of well-being and time use from a subjective viewpoint will be addressed. The section will show how the existing studies provide an incomplete representation of satisfaction with time use, the factors which constitute it, and the nature of relationship between time use and well-being.

It is important to note that although several studies on the relationship between time use and well-being will be examined in this chapter from the position of time use researchers, this will be done prior to considering the nature of well-being itself and the extensive literature on this topic. These latter points will be addressed in Chapter 3, which reviews literature on well-being and life goals. Chapter 3 will also cover several studies concerning temporal processes but carried out within the remits of well-being and/or life goals research.

2.1. Nature of time

2.1.1. Philosophical foundations

A lay approach may treat time as something “out there” that can be made use of. Time is often taken for granted with not much attention paid to it. Philosophers and other scholars, however, have devoted a lot of thinking to considering the nature of time. Amongst the central philosophical debates is whether time is subjectively or objectively based, which will be briefly discussed in this section. It is important for the thesis because this debate informs different approaches to studying time use and underlies the choice of an appropriate methodology for answering the primary research questions.

The origins of the debate on the nature of time in the West can be traced to the early Greek philosophers Heraclitus and Zeno. Heraclitus believed that reality was in a flux and changeable, pointing out that you cannot step into the same river twice. Zeno, on the other hand, believed that constancy was real while change was illusory (Elliot, 1997).

Aristotle too believed in the reality of change. The subjectivity in the experience of time was highlighted when he wrote that a perceiving mind must be present to keep track of before and after, otherwise there is no time. "Whether, if soul (mind) did not exist, time would exist or not, is a question that may fairly be asked; for if there cannot be some one to count there cannot be anything that can be counted...." (in Dowden, 2005). Aristotle foreshadowed the modern distinction between subjective and objective time.

St. Augustine is often cited as the first major proponent of a subjective view of time, saying that time is nothing in reality, but exists only in the mind's comprehension of that reality. "What then is time? If no one asks me, I know; if I want to explain it to a questioner, I do not know. But at any rate this much I dare affirm I know: that if nothing passed there would be no past time; if nothing were approaching, there would be no future time; if nothing were, there would be no present time...It's in you, o my mind, that I measure time. I do not measure the things themselves whose passage produced the impress; it is the impress that I measure when I measure time" (as cited in Elliot, 1997, p.14).

A number of philosophers and thinkers were also of an opinion that time is primarily subjective. For example, Henry of Ghent and Giles of Rome both argued that time exists in reality as an independent continuum, but is understood to be such only by the mind. In the 11th century, the Persian philosopher Avicenna doubted the existence of physical time, saying that time exists only in the mind because of memories of the past and expectations of the future (Dowden, 2005).

In the 17th century, the English physicist Isaac Barrow concluded that time is something which exists independently of motion and which existed even before God created the matter in the universe. Barrow's student, Isaac Newton, agreed with this opinion. Newton argued that time and space are an infinitely large container for all events, and that the container exists with or without the events. Newton was to become the most cited proponent of the view that time exists objectively.

Since then, many philosophers have contributed to this objective-subjective debate in one form or another. Leibniz objected to Newton's stance by saying that time does not exist independently from actual events. At the end of the 18th century, Kant conceptualised time as an "a priori" construction of the mind. For him the concept of time, as well as space, were given, not learnt through experience. Locke, on the other hand, thought that the experience of time was derived from external occurrences. French 19th century philosopher Jean-Marie Guyau disagreed with both of the above positions, claiming that time is an organisation of mental representations to describe change in the universe (Kazakina, 1999). In the 20th century, Einstein argued that time is relative and is dependent on the states of motion. This cast a new light on the very nature of objective time and opened opportunities to address the issue of the subjectivity and objectivity of time in a fresh way. When asked to explain relativity, Einstein jokingly commented: "When you sit with a nice girl for two hours, you think it's only a minute. But when you sit on a hot stove for a minute, you think it's two hours. That's relativity" (in Atchley, 2001, p. 158).

The above debate formed the bases of the current philosophical, sociological, anthropological and psychological conceptions of time, which will be considered further in the chapter, after a brief excursion into the evolution of time in history.

2.1.2. Social history of time

Religious, technological and economic forces contributed to the shaping of the Western attitude to time. Prior to the Middle Ages, time was understood as *cyclical*, tied to seasons and natural rhythms. Cyclical time embraced a model of life based on reproduction and homeostasis. This model suited agricultural communities well: one plants in the spring, looks after the crops in the summer, picks up the harvest in the autumn, and prepares for the next year in the winter. The next spring the cycle starts again (Leontjev, 2004).

In the West, monasteries were the first to attempt to regulate time by ringing bells to call the monks to prayer during the day. Their time instruments, like water clocks that froze in the cold weather and sundials that didn't "work" on cloudy days, were hardly precise or reliable. With the invention of the mechanical clock in the 13th century, monasteries were the first to utilise this discovery for regulating monks' days with the enhanced precision (Lofy, 2000). For the rest of the population during the medieval period, a typical working day stretched from dawn to dusk, still regulated by natural occurrences. However, the pace of work was significantly slower than today. The calendar was filled with holidays, wealth acquisition was limited, and the majority of peasant families did not put more than 150 days per year into working on the land (Schor, 1991).

Following the monasteries, local churches adopted responsibility for time-keeping. The tolling of bells signalled the time for prayer and public gatherings. With the beginning of the industrial revolution, bells came to be used to impose time discipline on home-based textile manufacturers. The progression from bells to public clock towers insured that the workers themselves could learn to tell and utilise time. By the 18th century clocks became accurate enough to allow adequate synchronization of many activities, which made them indispensable. The next challenge was to standardise the time, which until then was independently set by each town and province. The

pressure for this move came from the British Post Office, railway companies (struggling with chaotic railway timetables), and the invention of the electric telegraph. In October 1884, the International Meridian Conference voted to adopt Greenwich Mean Time as the basis of time calculations (France resisted for another 12 years but eventually surrendered to international pressure). The time-setting independence of towns disappeared. Time became the regulating structure for communication, commerce and work-related activities. Rifkin writes: “The standardization of world time marked the final victory for efficiency. Local times had long been tied to traditional values, to nature, to gods, to the mythic past. The new world time was bound only by abstract numbers” (1987, p.134). The clock time grew to dominate further during the nineteenth and twentieth century, supported by the introduction of affordable watches and industrial developments in which time started to equate to money.

The essence of scientific management introduced by Taylor was to subdivide tasks into their component parts in order to speed up production. Organising work meant organising every aspect of life. Thus scientific management contributed to firmly tying people to external time regulated by the clock (Elliot, 1997).

What this brief historical account illustrates is that, until relatively recently, time was approached as relational rather than absolute, relative to circumstances rather than unchangeable and imposed from the outside. With the movement to standardised time and the spreading of affordable clocks and watches shortly afterwards, time evolved into an abstract, linear, universal entity, synchronised around the globe (Hendricks, 2001). For the debate about the nature of time, this means objective time became a more dominant paradigm, easily accepted and widespread in Western society.

2.1.3. Current conceptions of time

The next section addresses the interaction and interplay between philosophical and psychological theories that contribute to the current representations of time in literature.

Augustine and Newton argued the two diametrically opposite positions – that time is subjectively or objectively based. Nowadays, many approaches to time in one way or another reflect this central debate. The majority of modern discussions about time are essentially dualistic, whether they refer to the distinction between cosmic and human time, psychological and physical time, emergence of events vs. mathematical possibility, etc (Barrett, 1978). Jaques (1982), for example, identifies two dimensions of the experience of time: *living time* and *lifeless time*. Lifeless (objective) time is described as an axis of succession (an external time scale, associated with the sequential representation of time units), used for the standardisation of calendars and clocks. Living (subjective) time is the axis of intention (or internal time experience), referring to planning, accomplishment, purposeful activity and self-directedness. Elliot (1997) speaks of *chronos* and *kairos* time, concepts originated in Ancient Greece, later utilised by Christianity and then modified by subsequent thinkers. Chronos refers to measuring time in a before-after sequence (objectively), whilst kairos is a cyclical, seasonal, value-laden, relational time. A present moment of kairos, as any lived experience, can incorporate past and future, and is contrasted with the neutrality of chronos. Buddhists' concept of mindfulness is closely allied with kairos (Grudzen & Oberle, 2001).

To summarise the current positions, on the one hand, time can be approached as an objective phenomenon, and is also sometimes called *geographical* or *clock* time. This perspective regards time as linear and continuous, homogeneous, infinitely divisible, objective, and universal. This view is dominant in the Western societies where time can be scheduled, measured, coordinated and is externally created and reinforced by society. It is important to emphasise, however, that this objective view of time is in itself twofold because it utilises two meanings of objectivity. The first meaning concerns ontological objectivity, which is a claim that time has an independent existence from an observer (as described in section 2.1.1 above). The second meaning of objectivity of time refers to the shared collective representation of time, which

through the process of internalisation leads to objectifying time and identifying it with the clock (as described in the social history of time). It is possible to talk about the objective time in its second sense without referring to its ontological status (whether it actually exists or not).

On the other hand time can be approached as an internal subjective phenomenon (Gorman & Wessman, 1977). This facet of time has been variously named by different theorists as “psychological time” (Golovakina & Kronick, 1989), “time as it is processed by the human mind” or “subjective experience of time” (Levin and Zakay, 1989, p.2), “the inner time of the mind” (Melges, 1982, p.10) or “lived time” (Gorman and Wessman, 1977). Kairos time too finds its place in this category. Psychological or lived time events, occurring simultaneously as marked by the calendar, can be experienced by individuals in very different ways: one event may seem vivid and still current, whereas another one is perceived as having occurred “ages ago”. Thus, subjective time is influenced by the pace, life stages, changes in life, contents and sequence of thoughts, feelings and activities of the individuals (Hendricks & Peters, 1986). In subjective time events may be discontinuous and their flow uneven. The same duration of events as measured by the clock may be experienced very differently when participants “lose” themselves in the process. This time has unique significance and meaning for each individual.

A number of scholars go beyond dualism and offer more complex theoretical models of time. In addressing the relationship between time, biology and society, Luckmann (1991) distinguishes between “the body and inner time”, “social interaction and intersubjective time”, “time and the social stock of knowledge” and “biography and historical time”. Frazer (1992), on the other hand, outlines four somewhat different layers: “time in the organising, communicative and imaginative functions of the mind” (psychological domain), “socialization and collective evaluation of time” (sociological

and anthropological domain), “time in the life process” (biological domain) and “time in the physical world” (domain of physics) (Wilcock, 1999).

Some believe that it is possible to integrate those various conceptions of time, by acknowledging its different characteristics. McGrath and Tschan (2004) claim that the current dominant view of time, albeit based on the Newtonian conception, combines a number of features from different viewpoints. Thus, it has something to do with both succession and duration, it is continuous but measured in discrete units, abstract, absolute but relative in some situations (in relation to the observer or to a situational context), linear and directional (flowing forward) with some cyclical aspects, homogeneous (with every bit the same) and epochal (with some moment more significant than others). Our conception of time is often very different from our experience of it. It is in our experience where the features of time as being relative, concrete, cyclical, epochal and sometimes multiple, come forward. Accordingly, people’s lives are shaped by multiple conceptions of time, which can appear incompatible to an outside observer but co-exist inside the individuals.

Relevance of the above debate to the research questions

The above review has considered the evolution of a central time dichotomy from the positions of philosophy, history and current conceptions on time. The two perspectives that emerge as dominant in the discussions of time: a Newtonian view of time as something objective, and a subjective position introduced by Augustine, find their application in two different approaches adopted for studying time and its use by social scientists nowadays. Whilst both perspectives have their merits, a choice between them has a bearing on both the methodology and likely outcomes of the present thesis. This is what will be considered next.

2.2. Approaching time use objectively – time use research

The part of the review that follows will look at the literatures concerned with objective time use measurement. Following an introduction, the methodology of time use research will be considered. After that, some paradoxical findings and limitations of time use research will be addressed, including difficulties in establishing a relationship between time use and well-being when utilising the described methodology.

Time use research is a well established tradition in social science, which attempts to answer questions such as how people use their time and how they distribute this time over sets of activities. It provides information on a range from what people do day to day to people's feelings and activities from minute to minute. The earliest accounts of time use were published in the UK in 1913. Major time use series were carried out throughout the 20th century. Time use research has proven useful in serving the interests of different fields with the questions addressed ranging from social problems, cultures and lifestyles, consumer behaviour, poverty, needs of special groups, household economics, gender-based division of labour, leisure and travel preferences, and social indicators like quality of life (Andorka, 1987). However, certain concerns can be raised as to the usefulness of time use data for addressing the problems of well-being and quality of life. The key question that needs to be considered is whether time use research provides a good way of approaching the research questions.

The variables of lifestyle, gender, age, social class, employment status, work load, marital status, presence of children in the household and the level of responsibility for them have shown to be the major factors that affect time allocation to activities and activity participation. Contextual factors, including geographic location, shop opening hours, time of the year, day of the week, vacation/non-vacation days also appear to have an influence (Hill, 1985). Longitudinal data suggests that time allocation in terms of participation or non-participation in certain activities demonstrates relative stability across the life span, subject to age and life cycle (Singleton, 1999).

2.2.1. Time use methodology

The methods of time use data collection include direct observations (which has been shown to be the most accurate, though very costly method); activity frequency and duration surveys; beeper (or experience sampling method) studies; time diary (all activities are recorded, including contextual and subjective data, individuals use their terminology to describe their activities); time estimates (which have proven to be extremely unreliable); telephone coincidental studies and the random-hour technique (report on the smaller segments of the day) (Harvey and Pentland, 1999; Robinson, 1999). Time diary and beeper studies are considered in more details below.

Time diary is recognised as the most popular method of recording time use. It is a naturalistic technique for collecting self-reports of activities which are then classified into coded categories. Time diaries allow researchers to examine the duration and distribution of activities across the day span, as well as to record additional factors such as enjoyment and satisfaction. It is intended that all daily activities across 1,440 minutes of the 24-hours of the day are recorded. Robinson and Godbey (1997) point out that time diary data is complete. When all 24 hours are reported, it means that all human behaviour is captured and represented. Many sociologists argue that time-budget data can provide insights into what activities are most predictive of well-being and of stress, which could lead to appropriate development of social environments (Ujimoto, 1999). However, this point is questionable and will be considered further.

Another popular method for studying time use is the Experience Sampling Method (ESM), sometimes called the *beeper* method. Experience sampling is a methodology for collecting data on patterns of behaviour, thoughts and feelings from real-life situations. Participants are required to complete their questionnaires within a few minutes from receiving a signal which is sent several times a day on random occasions (Csikszentmihalyi et al, 1977). ESM has been used previously in studying time use (Larson, 1989; Haworth and Millar, 1986; Csikszentmihalyi, 1993;

Csikszentmihalyi, 1997; etc) and its effectiveness has been evaluated. However, this approach is only viable for collecting situational or momentary accounts of constructs such as well-being, and is not easily applicable to studying global well-being. The distinction between momentary and global well-being is discussed in the next chapter. It is also difficult to use the ESM to account for all activity in the day rather than for independent episodes.

2.2.2. Time use categories

Data collected by the means of time diary is coded into categories which are then used for further analysis. Robinson (1999) advocates four major types of time use: paid work, family care (home, child care and shopping), personal care and travel (food intake, sleep, looking after oneself), free time (adult education, organisational activity, cultural events, social life, fitness activity, hobbies, mass media, home communication) into which up to 250 activities can be coded. However, this standard classification of time use is not the only one proposed. Rigbers (1994), for example, attempts to classify time use according to the behavioural frame within which activities are performed. By that she means the reasons underlying performance of activities. Her classification thus includes bounded time (necessary activities), contracted time (activities due to agreement), committed time (activities due to attention) and free time (activities due to preferences). Szalai (1972) codes activities into non-free time and free-time activities, identifying 99 sub-categories in total. Csikszentmihalyi (1997) distinguishes between three main classes of activity, namely work (or productive activity), maintenance and free time.

Clearly, a lack of consensus between the researchers on classification of time use makes it difficult to draw comparisons between various studies. Yet, this is not the only problem of time use classification. The “Limitations of time use studies” section below will take this matter further.

2.2.3. Paradoxes of time use

This section will address a number of surprising findings of time use research, which will have a bearing both on the choice of methodology and on the research questions. It appears that there is little correspondence between the findings that acknowledge increases in working time, those that claim that working time has decreased, and the subjective increases in the feelings of time scarcity reported by time survey participants.

2.2.3.1. Time squeeze

The concepts of *time crunch*, *time squeeze* and *time famine* are widely used in the media and popular culture to account for the seeming increase of working hours at the expense of personal leisure. A number of theorists support this representation by arguing that the process of industrialisation has led to an increase in work hours (Wilensky, 1961), that the decades of the 1970s and 1980s have witnessed a rapid reduction in leisure (Schor, 1991) and that people have to invest large amounts of time in order to deal with the emotional cost of overworking (Hochschild, 1996). Zuzanek and Smale (1994) report that it is those of higher socio-economical status that tend to work longer hours and have less leisure time (this applies to weekdays as well as Sundays). Arthur and Tait (2004) stress that Britain has opted out of the EU Working Time Directive capping the working week at 48 hours. This indicates that British employees have the longest working hours and shortest lunch breaks and holidays in Europe.

The time squeeze concept even has its proponents. Leontjev (2004), for example, equates having time with boredom, with having nothing to do. He argues that only when time is seen as a deficit, it is used productively. Freedman and Edwards (1988) also do not treat time pressure as inherently negative. In their experimental studies on time pressure and performance, they asked students to solve puzzles in different amounts of time. They concluded that an intermediate amount of time pressure benefits performance, whilst too low or too high time pressure disadvantages it.

2.2.3.2. Time increase

The concept of “time famine” is challenged by some behaviour-linked evidence. A number of scientists studying time use patterns have discovered that over the last four-five decades we have witnessed a decrease in work time. They estimate that we have, on average, gained between 5 and 7 free hours a week (Robinson and Godbey, 1997; Pentland et al, 1999). Kalfs and Harvey (1994), drawing on Dutch, Japanese and Bulgarian samples support the claim about the reduction in the working hours, but stress that leisure time appears to be squeezed out by numerous commitments, such as family-related travelling, dealing with maintenance of household equipment and increasing correspondence.

In a recent paper Bonney (2005) offers an explanation for an “overworked Briton” phenomenon. He explains that a widespread perception of long hours is based on focusing exclusively on a small proportion of full-time employees. This perception omits the fact that Britain has the highest proportion of part-timers in Europe, which Bonney sees as one of the optimal strategies of achieving work-family balance. Sharing the paid work around equally, it transpires that the average number of paid work hours per week is 32.6 (2003), which has actually fallen from 33.2 in 1994 (with full-time working hours also falling by almost an hour during the same period).

Somewhat midway, Sullivan and Gershuny (2001) are of the opinion that the allocation of time for work and leisure has remained relatively stable between the 1960s and 1990s, with working hours decreasing in the 1960/70s and increasing in the late 1970s and 1980s. To be more precise, women’s overall work and housework time decreased, while men’s productive time showed a slight increase, which can be accounted for by their greater involvement in childcare and home related activities. This finding, however, is not applicable for employed women with small children, who still experience the greatest time pressure. Bluestone and Rose (1997) demonstrate that the increase occurred only between 1982 and 1996, and was much smaller than Schor

implied. Many others, including Veal (2004) argue that Schor's account of time crunch is exaggerated and ignores many potentially relevant factors.

Zuzanek (2004) notes that there continues to be genuine disagreement on whether the amount of working hours have increased or decreased in recent times.

2.2.3.3. Time experience

Findings about increases in leisure time are not supported by people's own estimations. Time use literature points to a very large discrepancy between people's estimates of their time use and the actuality of it (Robinson and Godbey, 1997). Respondents estimate that they have fewer than 20 hours of free time a week, which is about half of what is actually reported in time diaries. Similar trends have been found in the majority of European and Western countries. Robinson and Godbey (1997) have found that feelings of time-pressure (of always being rushed) have increased significantly from 24% in 1965 to 38% in 1992. Thus, paradoxically, there seems to be a wide gap between the evidence derived from time use data and people's subjective reality, which is also supported by the media and public representation of "time famine". Sullivan and Gershuny (2001) offer the following hypotheses to account for why it may be so.

- First of all, it may be that the overall trends for the population are not reflective of specific subgroups (such as dual-earner couples with young children).
- Secondly, as people progress along their life-course, their commitments usually increase. Therefore, the perception of being more hurried may, in fact, originate from comparing the current stage of life with the previous stages.
- Finally, it may be possible that the perception of pressure follows the change in patterns and meanings of time use. For instance, people may be simultaneously engaging in a larger number of activities or there is a greater segmentation of time.

The latter possibility has been supported empirically. Gershuny and Jones (1987) have established that while the rates of participation in leisure activities have increased, the total time of participation has, in fact, decreased. Thus, fragmentation of time may be one of the keys to understanding the phenomenological experience of time scarcity.

There is, however, another possible explanation. Defining free time may raise the question “What do we mean by free time”? It is possible that respondents and researchers attribute different meanings to the notion of free time, which might explain significant differences discussed above. Section 2.2.2 already introduced the coding schemes used by the researchers, not all of which may be easily accepted by a lay person. Section 2.2.4.3 will consider this matter further.

According to Fried and Slowik (2004), involvement in multiple roles (work, family, leisure, etc) means that people have to exist in multiple time streams simultaneously. This multitude may contribute to the perceived scarcity of time in each of those roles. They further emphasise the danger of involvement in challenging tasks, over an extended period of time, without sufficient time intervals between them. They suggest varying the difficulty and effort levels of tasks in order to reduce the time stress.

Even if there is much disagreement on whether the working hours decreased or increased, most scholars acknowledge the intensification of time scarcity feelings. If a decrease in working hours is accepted, these feelings appear to contradict the objective reality and thus represent a major time use paradox.

2.2.3.4. Where does the time go?

Time has a zero-sum character – if one decreases time on some activity, time on some other activity must be increased (Robinson, 1999). The documented increases of time have been found to be largely devoted to television viewing, even though it was found to be associated with boredom, low level of concentration, low level of potency, lack of clarity of thought and lack of flow (Csikszentmihalyi, 1992). Robinson argues that an

average person spends more than 14 hours a week on TV watching, which constitutes a significant proportion of free time. Clarke and Haworth (1994), however, have shown that high enjoyment can be experienced during TV watching. The second largest category of time that was found to have increased is travelling by car.

2.2.4. Limitations of time use studies

Not only are objective time use studies at loss to explain the paradoxes outlined above, there are other limitations inherent in this approach.

2.2.4.1. Discrepancy between objective and subjective time

Even though time use methods might provide an accurate picture of the actual time allocation, they do not tackle the subjective nature of time, which is why they cannot explain a huge discrepancy between actual time expenditure and our perception of it. Joseph McGrath (1988), one of the leading researchers on time, argues that our day-to-day experience of time does not map easily onto the concept of linear, directional and measurable time represented in the widely accepted Newtonian conception. Time use methodology provides a true description of what people do and where they do it, but it is silent about *why* people may choose to do one activity over another, the *energy* they put into an activity, the level of *productivity* whilst engaged in an activity or the *well-being* people derive from their time allocation. Time budgets cannot explain time expenditure shifts, either at personal or societal levels. Robinson and Godbey (1997) write: "For example, an increase in such simple activity as watching television can represent a shift towards increased laziness, a reaction to the dangers that lie outside the confines of one's home, an improvement in television's ability to meet audience need, the use of a more efficient medium to learn about human behaviour, or the only activity left to the individual after more-exhausting aspects of life. It could simply reflect the aging of the population as retired people watch more television." (p.15).

2.2.4.2. Discrepancy between time expenditure and activity outcomes

Several attempts to relate time diary findings to output measures have failed to provide a strong association between the amount of time used and objective outcomes. In a series of studies Schuman and his colleagues (1985) found no significant correlation between the time students spent studying and their grades, even when controlled for educational ability. Puzzled by these findings, they replicated their studies with more elaborate measures and found the same results: study time per se made little difference to the grades, although the time spent attending classes did make a difference. Robinson (1982) demonstrated that even though employed women spent 40% less time on housework than housewives, it did not have a significant effect on any of the output measures of house cleanliness (as rated by an interviewer, by the respondent herself, or by the respondent's own estimation of comments made by a "picky person" they knew). In other words, whilst these ratings were slightly lower if a woman was employed, her house was not rated as significantly less tidy than houses of full-time housewives. Moreover, having objectively less free time (because of working longer hours) does not prevent people from participation in cultural and arts events (Putnam, 1995). In fact, it appears that busier people report higher than average levels of such participation. Furthermore, respondents who agree to co-operate in a diary study are more likely to lead highly active lives (Robinson, 1985). This is consistent with the Parkinson adage that if you want something done, give it to a busy person. These findings could imply that it is the subjective experience (including, possibly, readiness, focus on the task, efficacy beliefs, etc) rather than the amount of time involved that is more important for objective outcomes. Of course, care must be taken not to overstate the value of these findings. Robinson and Godbey themselves (1997, p. 253) write: "This is not to say that time is always or usually irrelevant – some time is always needed to complete any task – but that we should not be surprised when we find a marginal correlation between time expenditures (inputs) and related outcomes (outputs)".

2.2.4.3. Discrepancy between categorisations of time use

It is believed that the use of time can be categorised in a relatively objective manner, in which the categorisations of an observer will be similar to those of the respondent. However, a respondent's psychological evaluation of activities may differ dramatically from the categories employed (Lawton, 1999). An example of discrepancy between categorisations comes from leisure research (Shaw, 1986): the division between non-free (work, housework, personal care and childcare) and free (study and participation, mass media, leisure and leisure travel) time is commonly accepted in time use research. Shaw used personal interviews to establish what activities from the previously completed 48-hours time diary participants themselves classified as work or leisure (or a mixture of work and leisure, or neither). These calculations of subjective leisure time were then compared to calculations of free and recreation time devised from the completed time diaries on the basis of the coding scheme utilised by most researchers. The comparison of means demonstrated that what the participants thought to be leisure was of significantly longer duration than what researchers would usually assign into this category. This huge difference between subjective leisure and objective free time suggests that leisure experiences do occur during activities not usually recognised as leisure, such as work, housework, child care or personal care. However, not all time considered by conventional research as free or recreational was judged to be leisure by participants, for example reading could be seen as work-related. This example highlights the problem of interpreting (or misinterpreting) personal time usage on the basis of "objective" measures. For example, an interesting question was raised by McKinnon (1992), who asked whether time spent "just thinking" would fall into the self-care, leisure or productive category.

2.2.4.4. Meaning of time expenditures

The above evidence suggests that so-called objective time use data is not always a good measure of accomplishments, interpretation of activities or perception of time pressures. Furthermore, time as measured mechanically seems to be very far divorced from meaning (Michelson, 1999), which makes time use studies descriptive rather than interpretative (Zuzanek, 1991). Yet, the issue of meaning is fundamental for the way we construct reality or form a coherent representation of the world. The failure of time use methodology to address the question of meaning results in failing to understand human behaviour in its complexity and richness. “By using a strictly quantitative, assembly-belt conception of time – time as a moving belt of equal units – one ignores the significance of most activity. A moment of awe in religion or ecstasy in love or orgasm in intercourse, a decisive blow to an enemy, relief in a sneeze or death in a fall is treated as equal to a moment of riding on a bus, shovelling coal, or eating beans” (Robinson and Godbey, 1997, p.142).

2.2.5. Time use and well-being, further problems of measurement

The relationship between time use and well-being, which is the main focus of this thesis, is attracting the attention of many social scientists (Pentland et al, 1998). Pentland and McColl (1999) argue that it is possible to record the degree of control people feel over engaging in a particular activity, satisfaction with the activity, mood level and perceived balance of the activities in which respondents participate using time diary methodology. However, a majority of the attempts to establish relationships between time use and well-being have failed to produce expected results.

Lawton et al (1987) looked at the activities of 525 elderly people. They concluded that older people engaged in the activities they liked doing. Liking and satisfaction with activities were associated with higher well-being, since as Lawton et al noted both were “the sectors of subjective experience” (p. 174). However, well-being

was found to be independent from the amount of time spent in any one specific activity. Lawton et al concluded that while there may be no direct relationship between time use and well-being, satisfaction gained from an activity, the meaning of the activity, and preferences for engaging into activity may have an effect on subjective well-being.

Sullivan (1996) sees well-being as the overall enjoyment of time which can be derived directly from the sum of enjoyment rating for each specific activity, divided by the number of activities a person engaged in (this measure is similar to the measure of “process well-being” developed by Dow and Juster, 1985, and to the notion of “objective well-being” advocated by Kahneman, 1999 and Layard, 2005). Sullivan claims that this measure is more likely to reflect the actual quality of daily life because it is grounded in immediate experiences of activities. However, he has not found any support for his prediction that the more time people allocate to the activities they enjoy the most, the greater their level of the overall enjoyment of time will be. Gordon and Caltabiano (1996) researched leisure-time use by Australian adolescents and found a negative relationship between leisure opportunities available and leisure satisfaction. It appears that a “the more, the more” attitude and the availability of leisure opportunities reduces satisfaction with the actual experience of free time. These conclusions also support previous findings that it is often those with the greatest constraints on their time who have the highest level of well-being (Headey and Wearing, 1992).

McKinnon finds that time use by elderly people shows no relationship between self-rated happiness and time use for various activities and categories (1992). Zuzanek and Box (1988) and Pentland et al (1998) have found little or no relationship between time spent in different activities and life satisfaction, as well as the other measures of psychological adjustment. On the other hand, the estimates of the “usual” frequencies of participation (leisure time behaviours) were positively correlated with higher life satisfaction. Zuzanek and Box (1988) write that consideration should be given not only to the number of activities people are engaged in, but also to the meaning attributed to

those activities (their sample was from the elderly population). Participation in some leisure activities correlates with life satisfaction more highly. Thus life satisfaction is correlated with the ability to structure time which allows participants to engage in their chosen activities (rather than with the amount of free or otherwise time available).

A recent thesis by Pichetpongsa (2004), however, makes a case that work intensity (number of hours spent at work) appears to have an inverse relationship with well-being. This conclusion is based on a Thai sample of low-income workers, and it may not be possible to generalise these findings to other populations.

Lawton (1999) proposes several different explanations for why “time-budget estimates of categories of activity normally thought to be positively engaging might not be associated with other measures of psychological well-being” (p.118):

1. Categories into which activities are coded may be too broad (e.g. hobby) and do not reflect the psychological significance of each individual activity for a person.
2. People spent a great proportion of their time on prescribed activities. Therefore the proportion of affective or meaningful time is minimal and not significant on a daily basis. This is one of the least likely explanations, because it is plausible that even prescribed activities may, in fact, be judged as meaningful.
3. The relationship between time use and well-being may be non linear and /or of several types.
4. Psychological well-being may be independent from time use.
5. Well-being and daily time use are incommensurate concepts. Well-being is a relatively stable personality characteristic while time use on any given day is a tiny proportion of time use in general. It is possible, therefore that daily time use may be correlated with affective/momentary but not global well-being (see next chapter for definitions of different types of well-being). This point was supported by a number of studies showing correlations between daily events, hassles, stressors and major life disruptions with positive and negative affect (Sheldon et al, 1996; Clark and

Watson, 1988). Stone & Neale (1984) demonstrated, however, that even severe negative events do not have an enduring effect on affective well-being.

While a number of his explanations seem to have value, it is becoming clear that it is difficult, if not impossible, to deduce time use – well-being relationship from the objective time use data. It appears that the greatest problem lies in trying to compare something that is objective (patterns of time allocation) with a subjective psychological construct such as well-being. If we turn to some studies that attempted to tap into a more psychological, subjective domain of time use, a different picture emerges.

Relevance of the objective time use review to the research questions

Time use research points at the discrepancy between “time squeeze”, as experienced by people, and the actual increase in free time as evident from the analyses of time use patterns. However, whether grounded in objective reality or not, it is the experience of time that needs to be considered if we are to understand what makes people satisfied with time and the relationship between time use and well-being, the latter being a subjective concept in itself (see chapter 3).

Although the long history and sound methodology of time use studies place them well to explore a relationship between time expenditure and well-being, most of them failed to establish such a relationship. This suggests two major possibilities: either these counterintuitive findings can be accepted as true, or the methodology of time use studies may be seen as not adequate in this instance.

The failure of time use research to present a satisfactory representation of the objective outcomes of activities, people’s psychological states, meaning assigned to time expenditure and relationship of time use with constructs such as well-being, provides further indications that the objective time use paradigm is, perhaps, insufficiently appropriate for the research questions posed by this thesis. The research on time use falling within the subjective paradigm will be examined next.

2.3. Focus on the subjective experience of time use

Many researchers point out that the studies of subjective experience of time use across life cycle are rare (Tindale, 1991; Gershuny and Sullivan, 1998). Abul'-khanova-Slavskaia (1996) makes a claim that in order to understand personal organisation of time one needs to take into account both objective and subjective features of time. Her studies have suggested that the structure of the personal organisation of time has three components, namely, 1) cognitive awareness of time (pragmatic judgments, philosophical judgments and judgments evaluating the activity), 2) the subjective emotional experience of time (extension, emotionality, stress level) and 3) the temporal organisation of activity. Hassard (1996) too stresses the importance of incorporating both objective and subjective features of time into future studies. Pentland and Harvey (1999) propose that time use has to be examined both at the micro and macro levels. They claim that macro level time use methodologies (e.g. time diary studies) appear to be quite robust, while the methodologies for studying time allocation at the micro level (subjective, individual level) require further development and validation.

Four ways in which to pursue exploration of subjective factors in time use data were proposed by Michelson (1999):

- Sampling with analytic intent – selecting samples according to the independent variable tested, e.g. to see whether behaviour patterns are context-dependant.
- Episode analysis – focus is on a particular activity (e.g. paid employment at home) and on a specific dimension (e.g. with whom) in relation to this activity.
- Direct measurement of subjective aspects – for example, adding subjective dimensions of time use to the commonly used objective dimensions.
- Triangulation – relying on the use of complementary data or additional research methods to validate the results obtained via time use diary.

The last two approaches proposed by Michelson seem to be particularly appropriate for studying the many questions posed by time use data. Harvey et al (1991) also writes: “Specific activities and situations have been examined primarily in terms of who does them and for how long, rather than in terms of how they themselves can be characterized and understood in terms of duration, timing, sequencing, context, and other relevant dimensions. Thus, we know relatively little about the essence of activities themselves, having only an *a priori* understanding of their nature” (pp. 229-230).

Robinson and Godbey (1997) maintain that it’s very important to carry out qualitative studies of the meaning and role of time in people’s lives. The combination of qualitative insights with quantitative methodologies would allow researchers to test many important hypotheses about the nature of time use. “The questions raised in our *quantitative* journey through the time diaries raise fundamental *qualitative* questions about time and daily life that can be addressed with a directed set of in-depth interviews of a cross-section sample. That would give future time diary data collection a much clearer sense of purpose and provide a richer set of hypotheses to test” (p.292).

Wilcock (1999) highlights an acute need to combine critical analysis with depth of understanding so that we can appreciate people in all aspects of their temporality “...because the ‘temporal human’ is so in response to multilevel influences of temporal factors, from biological rhythms that underlie activity, to time constructs imposed by political economies” (p.208). In order to integrate “what” (people do) and “why” (they do it) Wilcock states that quantitative data collected via time diaries must be supplemented by qualitative data collection methods, which may include: in-depth interview, history of ideas (a form of literature review), focus group discussion, and narrative or story-telling approaches. Also, Mitchell and James (2001) and McGrath and Tschan (2004) stress the importance of qualitative methods for collecting and analysing time use data. A sample of qualitative studies examined below provides deep insights into people’s experience of time use.

2.3.1. Qualitative studies of subjective experience of time use

Michelson (1988) ran a large study (538 families) into the time use experiences of employed spouses using a variety of methods. He found that despite seeming convergence (hours spent at work, travelling, leisure, tension level), women's qualitative experiences of their daily routines were very different from those of men. Thus they put on average two hours more into obligatory activities than men, experience higher stress during travelling to work (through the use of public transport and having to drop children off to day care), experience tension from involvement in different activities than men (e.g. from getting children ready rather than paid employment).

Arthur and Tait (2004) studied the use of time of students who combined employment with studying, asking questions such as how people manage to find time to study alongside their work commitments and what helps some people to cope better than others. Using semi-structured interviews and qualitative means of analysis, Arthur and Tait identified three emerging themes: coping (finding it hard to cope with the lack of time), competing commitments (this theme was particularly salient for those combining work, studying and parenthood of young children) and sustaining motivation.

The study of Nippert-Eng (1996) explored how people negotiate boundaries between home and work. The results distinguish between two broad approaches to boundary management, which are expressed by either integration or segmentation tendencies (or the corresponding personality types). For the integrator, the categories of work and leisure are overlapping, while the segmentator sees them as strictly separate with everything belonging to either the work or home domain.

The next three studies are described in more detail because these are seen as particularly significant for the current project, because of the use of similar methodology and the raising of somewhat similar research questions.

Mary Lofy (2000) in her PhD addressed two fundamental questions: how people experience time and what meaning they give to that experience. She explored the tension between time as a commodified, quantified structure and the subjective, emotional reality that people experience in multiple ways in their everyday lives. Her interview study found that in order to be able to manage time successfully, people must set their priorities clearly and assert personal power over time. Lofy emphasised that success in dealing with time pressures does not lie in the domain of time management but in the personal mindset, which includes: having a sense of self, willingness to assert personal control and interest in reflection.

A recent PhD research that also dealt with the questions of how time can be represented and assigned meaning was carried out by Bennett-Woods (2004). This was a phenomenological study of the experience of time and the meaning managers in a health-care setting gave to time. The meaning of time emerged in metaphors, including time as structure, time as a barrier and boundary, time as accomplishment, time as relationship, time as precious and scarce, and time as an enemy and ally. Her conclusions fall onto already existing metaphorical grounds theorised by Lakoff & Johnson (1999), who offer several conceptualisations of time: as orientation (past, present or future), as moving, the moving observer, time as a resource and as money. Thus, for example, perception of time as a barrier and boundary arises from time moving by and passing us, the metaphor of time as precious exists only if we treat time as a resource. Bennett-Woods findings, however, add a very human relational perspective projected onto time, as in time as relationship or time as enemy or ally. She found traditional approaches to time management to be problematic in light of phenomenological experience of time as fragmented. Bennett-Woods identified two competing time paradigms (clock and experience-based), arguing for recognition of the second one that requires different levels of flexibility and adaptability.

Another qualitative phenomenological PhD study, which examined how busy professionals achieve a sense of balance with their time use at work, was carried out by Myrna Elliot (1997), who asked ten of them to describe work experiences where they felt the most in-balance and productive with their time and where they felt the opposite. Her notion of being in-balance with time refers to balancing objective (chronos) and subjective (kairos) time in one's life, and resembles a notion of satisfaction with time use frequently utilised in the present thesis. A surprising result was that her subjects emphasised achievement, not time, in their accounts. Elliot concluded that achieving the balance with time is facilitated by *taking action on the right thing*. "Taking satisfactory actions" is the instrumental aspect of time use. It involves setting boundaries, being open (able to speak one's mind), seeing results (having a sense of closure), having a sense of order and freedom or independence to do the task one's own way. Knowing "the right thing" comes from a sense of congruence, having enough internal time to process the task and accepting the task psychologically. It reflects the meaning people assign to time use. She paralleled "taking action on the rights thing" with the blending of kairos (internal time) and chronos (external time of clocks and calendars). When a sense of balance with the time was felt, time receded into the background, no longer being an intrusive force. "Within this weaving of inner and outer time is the answer to balance – and our sense of harmony" (p.33).

Elliot's thesis is fundamental in providing background for the current research. However, it has a number of limitations, including a very specific subject profile and tying this investigation to incidents in the workplace and not to life in general. These limitations will be addressed by this PhD. Furthermore, the present study aims to determine whether similar components of being in balance with time would arise out of the interviews with a different sample; and whether all of the factors Elliot identified are important, or whether there is a critical number of those factors.

2.3.2. Time management and inventories of perceived time use

The term time management² first appeared in literature in the early 1930s, and was primarily applied to those in middle and upper-management positions in private companies. The strategies advocated by time management were summarised by Banks (1983) as the following: tracing one's actual (rather than imaginary) time expenditure, defining short, intermediate and long-term goals, identifying the main time-wasting activities, and scheduling. Macan et al (1990) summarised the advice of various authors on managing time as: identifying needs and wants, ranking these in order of priority, allocating time accordingly, delegating and asking oneself: "What is the best use of my time now?".

Larsson and Sanne (2005), who set themselves a task to content-analyse the advice of major self-help books on avoiding time shortage, identified six core categories: streamlining tasks (finding how to do the same task using less time), buying household services, minding one's basic needs (including food, exercise, time for hobbies), setting limits in relation to others (learning to say no, sharing household responsibilities with family members), setting limits to time-consuming aspirations (effectively lowering aspirations and striving towards satisficing), and using effective change methods.

Although time-management programmes are widespread and popular (e.g. Lakein, 1973), the evaluation of them has been limited and has rarely looked at the effects of such training on actual time-management behaviours (Claessens, 2004). The majority of studies utilised self-reports and few addressed the question of improvements in objective outcomes (Hanel, 1982; Hall & Hursch, 1982; Bost, 1984).

² Although time management training often approaches time objectively, seeking to change actual time-related behaviours, it is discussed in this section on subjective time use for the following reasons: 1) time-management inventories take the form of attitude surveys, and thus rely on one's subjective evaluation of their time-related behaviours; 2) specific time-management inventories considered here have strong subjective elements, unrelated to behaviour (e.g. feeling in control of one's time); 3) this section reviews a number of studies which have combined time management inventories with inventories explicitly concerning subjective time use; 4) the above indicates that time management appears to combine features of both objective and subjective time use.

Macan et al (1990) developed a Time Management Behaviour Scale (TMBS) in a two-stage process. A total of 288 students' responses to the 46 items of the scale resulted in identification of four factors, that accounted for 72% of the common variance: *setting goals and priorities*; *mechanics* (planning, scheduling); *perceived control of time*; and *preference for disorganisation*. The overall TMB score significantly correlated with a number of constructs, such as job satisfaction, performance, employer's ratings and including life satisfaction (though the level of correlation was low here). It appeared, that perceived control of time was the main correlate with variables such as life satisfaction at .31, job satisfaction at .32 and performance ratings at .37.

Using TMBS, Macan carried out a number of studies into the effectiveness of time management training. In her 1994 study with part-time students she did not find time management training to be very effective in increasing the adoption of time management behaviours. Furthermore, engagement in time management mechanics (making lists, scheduling activities) did not even appear to lead to an enhanced perceived control over time. In a quasi-experimental field study of 1996 Macan looked at whether participation in a time-management programme has an effect on time attitudes and behaviours and job performance. Once again, the training did not result in more frequent use of time-management behaviours (such as setting goals and priorities, making lists, planning and organising), more job satisfaction, less tension and better supervisors' ratings of job performance in comparison with the control group. However, four to five months after training, those who participated in the training reported an increase in feeling more in control over time. Claessens (2004) reports similar findings with regard to the sense of control over time, the extent of which was an important factor in affecting job performance, effectiveness and personal well-being at work. Differently from Macan (1994, 1996), however, Claessens (2004) states that engagement in time management behaviours did have an effect on job-related outcomes (such as completion of planned tasks and performance). She also makes a statement that

time management behaviours were associated with well-being. However, her definition of well-being (job satisfaction, work strain and psychosomatic complaints) is very different from the one adopted by the current thesis (see Chapter 3 for further discussion) and therefore this finding cannot be viewed as directly applicable to this thesis.

Slaven and Totterdell (1993) investigated self-reported and based on diary log behaviour changes, motivation, and commitment following a two-day time management course but were unable to determine whether the time management training changed related behaviours. Although delegates' self-reported knowledge and time management skills had increased, there were no significant changes in commitment, motivation or behaviour (e.g. participants did not spend more time on planned or higher-priority tasks).

In a replication study of Macan (1996), involving 522 working adults who were enrolled as part-time students, Adams and Jex (1999) found that perceived control of time mediated between setting goals and priorities, mechanics of time management, and preference for organisation on the one hand, and health and job satisfaction on the other hand. Setting goals and priorities and preference for organisation were positively related whereas mechanics of time management were negatively related to perceived control of time.

One of the drawbacks of time management is that it tends to endorse the view of time that is concerned with its objectification and utilisation (Banks, 1983). Perhaps, it is not surprising, therefore, that the majority of time management studies fail to show the effectiveness of TM practices, with the exception of improvements in the sense of control over time, which in itself belongs to the subjective domain of time use.

Covey et al (1994) and Green and Skinner (2005) note that not all time management is the same and distinguish between four generations of it. The first was based on reminders and checklists. The second added more planning, goal setting and

scheduling, accompanied by tangible aids such as paper planners or computers. The third brought in consideration of the values of individuals, long and short-term goals and daily prioritising, mainly in electronic or paper-based organisers. Because all three time management generations emphasised efficiency, they failed to help people to identify what is really important for them and were therefore ineffective, according to Covey et al (1994). The fourth generation is claimed to incorporate the best features of the earlier ones but focuses on identifying what is really important, spending more time on it and eliminating what is not important (Covey et al; Noon, 1998). Green and Skinner (2005) designed their training on the basis of Covey's et al (1994) principles. Having run 20 courses with 232 participants, they concluded improvements in the relevant time management skills as reported by the participants, especially prominent in the areas of planning, prioritising, assertiveness and reduction in stress levels, with 20% median improvement. Self-report scores were confirmed by managerial perception. Nevertheless, the use of self-reports to evaluate behaviour casts some doubt on the results of this study.

The studies considered above provide an inconclusive picture of the effectiveness of time management training. It might be, however, that differences in the outcomes are dependant on the length or content of training. It is also possible that so-called "fourth generation" training has more potential to improve the time management of individuals precisely because it focuses less on behaviour but more on subjective aspects of time use (such as values underlying time choices).

Several researchers have attempted to develop various inventories and questionnaires measuring subjective experience of time use, which some termed "perceived time use". Thus, for example, Wessman (1973) devised a Temporal Experience Questionnaire, consisting of 80 items. It was based on four bipolar factors: *immediate time pressure* (lack of control vs. relaxed mastery and adaptive flexibility), *long-term personal direction* (continuity and steady purpose vs. discontinuity and lack

of direction), *time utilisation* (efficient scheduling vs. procrastination and inefficiency), and *personal consistency* (inconsistency and changeability vs. consistency and dependability). The long term personal direction factor was found to be associated with happiness and elevated mood levels. In a somewhat similar study, Calabresi and Cohen (1968) found evidence for four factors underlying their 46-item questionnaire on time experience and time attitudes, including *time anxiety* and *time submissiveness* factors (which are respectively similar to the immediate time pressure and time utilisation factors of Wessman), and also *time possessiveness* (relatively weak) and *time flexibility* factors. Calabresi and Cohen's notion of time attitudes was not, however, sufficiently discriminated from the concept of time perspective, with their questionnaire showing some overlaps with the latter notion.

Britton and Glynn (1989) described a theoretical model of time management, which included several components: choosing goals and sub-goals, prioritising the goals, generating tasks and subtasks, prioritising the tasks, listing tasks on a to-do list, scheduling the tasks and carrying these out. Briton and Tesser's (1991) study used a time management questionnaire (TMQ) devised on the basis of this model and gave it to ninety high school students. Principal component analysis revealed three factors underlying this model: *short-range planning* (organisation), *time attitudes* (includes feeling in control and some elements of responsibility over time; Britton and Tesser believe that this factor is akin to self-efficacy) and *long-range planning* (longer-term projection into the future). Four years later, time management factors were regressed onto the cumulative point average obtained from college records. The first two time management factors were significant predictors of the cumulative point average (time attitudes being the strongest predictor) and accounted for more variance than Scholastic Aptitude Test (SAT) scores.

In their first study of the variable they call *time structure*, which is an individual's perception of whether their time is structured and purposeful, in 1983

Feather & Bond identified four factors: *engagement, direction, structure* and *routine*. Using employed and unemployed university graduates samples, they found that those who reported more purpose and structure to their time also had higher psychological well-being, optimism about the future, more efficient study habits, fewer physical symptoms, less depression and hopelessness. In a further series of studies, Bond and Feather (1988) continued developing their instrument called a Time Structure Questionnaire (TSQ) to assess this variable, by including ten new items and removing one item from the previous version. This time they found evidence for five factors underlying this construct: *sense of purpose, structured routine* (including planning), *present orientation, effective organisation*, and *persistence*, which accounted for 43% of total variance. They also found a positive relationship between the total TSQ score (perceived use of time) and many outcome variables including a sense of purpose in life, global self esteem, anxiety, self reported health, and study habits (moderate to high level of correlation). Close examination of the correlation analysis reveals, however, that sense of purpose is the main correlate, while structured routine, persistence, and especially present orientation show low to moderate correlations with very few outcome variables. It is questionable whether items related to present orientation should be included into the time structure questionnaire as these questions tap into the notion of time perspective, outlined in the works of many authors including Zimbardo and Boyd (1999). Indeed, subsequent studies (see below) did not find support for the present orientation subscale. Another limitation of the Bond and Feather (1988) studies is that they did not explore the relationship between time structure and well-being.

Mudrack (1997) evaluated both TSQ and TMBS by analysing item content, subscale score reliabilities and factor structures. Their studies confirmed that both TSQ and TMBS are multidimensional in nature. The results suggest that four of five TSQ subscales can appear in their original format, with the current Present Orientation subscale discontinued. Three of four TMBS subscales acquired sufficiently reliable

scores but according to the researcher, can be substantially truncated. Kelly (2003a) investigated the relationship between worry and time use among 130 students, using both TSQ and TMBS. He claims that total TSQ scores and three of its factors (sense of purpose, present orientation, and persistence) were negatively related to worry, however only the present orientation scale showed an acceptable level of correlation at above .3. TMBS did not show any correlations with worry, which lead Kelly to conclude that time structure and time management are two separate constructs.

Clearly, studies involving both TSQ (perceived structure and purpose in the use of time) and TMBS (time behaviours) are claiming that the two are separate constructs. They do, however, appear to overlap in the fact that both scales have subscales related to organisation. Furthermore, TMBS has a subscale of perceived control of time, which appears to be more related to the perceived use of time than to time use behaviours.

As it can be seen from the above review, the attempts to identify the factors of subjective experience of time use are not new in themselves. Yet, up to date, there are only a limited number of studies that endeavoured to operationalise this construct. A number of factors have been discovered, some overlapping, some found by one study only. It is unclear which of these factors carry most weight and whether there exist any other factors not yet identified by the creators of the inventories. Another common critique that can be applied to the above pieces of research is that none of them were founded in exploratory qualitative investigations. The factors of perceived time use discovered in qualitative research (e.g. Elliot, Lofy) have not been subjected to quantitative testing, nor did they inform subsequent inventories. Currently, existing studies provide only a partial representation of the phenomenon of subjective experience of time use, which includes constructs such as perceived time use or time structure. The factors that constitute this experience require further investigation.

2.3.2.1. Perceived time use and a notion of control

As can be noted from the above discussion, one concept seems to consistently re-occur in the findings of both qualitative and quantitative studies on time use. Perceived control over time, or as some name it, willingness to assert control over time, has been identified as an important factor by Lofy (2000), Macan et al (1990), Macan (1996), Britton and Tesser (1991), Claessens (2004), and Adams and Jex (1999). Tausig and Fenwick (2001) also suggest that perceived control increases work-life balance.

It may be possible to suggest that a well-researched construct of locus of control underlies the abovementioned construct of perceived control over time. Locus of control (Rotter, 1966) refers to the extent to which a person believes that the outcome of an event is contingent upon his or her own actions. People with an internal locus of control find a strong contingency between their actions and the outcomes, and are therefore likely to act to influence an outcome in their chosen direction. People with an external locus of control, on the other hand, are likely to believe that the outcomes of events are outside their control and are less likely to attempt to influence them. Locus of control has been found to be amongst the successful coping strategies with work stress (e.g. Dafne, 2004).

A very small number of studies (identified through database searches) that attempted to investigate the relationship between locus of control and different variables of perceived time use have produced encouraging findings. For example, Austin (1988), using an adapted version of Wessman's Temporal Experience Questionnaire, found partial correlations with locus of control in a management sample. The study by Hafstrom and Paynter (1991) suggests that feeling in control over one's life contributes to their time use satisfaction. Results from Feather and Bond study (1994), however, indicate that time structure scores were not significantly related to the locus of control scores. As these findings are very scarce, a relationship between locus of control and perceived time use deserves further investigation and will be addressed in this thesis.

2.3.3. Subjective experience of time use and well-being

Whilst the amount of time spent in specific activities is not predictive of well-being, a number of studies have shown that active participation enhances both health and well-being (Andorka, 1987). Lewinsohn and Graf (1973) argue that there exists a relationship between one's mood and a number of pleasant activities in which individuals engage. In this study the participants reported the frequency of occurrence of pleasurable events from the list of potential events which were selected on the basis of what they themselves considered to be the most pleasurable. The researchers also attempted to discover what kind of activities show most association with mood and identified 24 of such activities, which fall into the categories of positive social interactions, incompatible (with depression) affects (laughing, etc) and ego-supportive activities (planning or organising something, etc). Csikszentmihalyi (1997) finds that people report being least happy when they are resting, watching TV, reading or doing housework (not all researchers would agree with him, e.g. Haworth, 1997). On the other hand, people seem happiest when they make love, engage in hobbies or socialise. The findings of Stouffer (2001) also indicate that there is a relationship between activity level (as measured by time use questions) and life satisfaction amongst the oldest-old (i.e. very old participants).

It is one's *satisfaction with time use* that appears to be the strongest correlate with well-being. Pentland et al (1998) analysed time use by men with spinal cord injury. Contrary to their own predictions (and consistent with the findings of studies outlined above), they discovered that the amount of time spent in any (even preferred) activity was not predictive of life satisfaction, but the satisfaction with time use (or satisfaction with the balance of time use) was strongly predictive of life satisfaction/well-being. They conclude that "objective characteristics of time use (i.e. minutes) matter far less than the conceptual intrinsic aspects of the time (meaningfulness, challenge, satisfaction) for the individual" (p.20). This is also consistent with Wessman's (1973)

findings that long-term personal direction in his Temporal Experience Questionnaire was associated with happiness and heightened mood levels.

A number of studies have shed further light on the concept of satisfaction with time use. For instance, Gordon and Caltabiano (1996) in their study of urban and rural-based adolescents have found a positive relationship between self-esteem, leisure control and leisure (or free time) satisfaction. Adolescents with higher self-esteem reported feeling in control over their time and being significantly more satisfied with their leisure time allocation. Hafstrom and Paynter (1991) looked at satisfaction with time use of the wives living on family farms and found it to be influenced by the wife's satisfaction with the way the household operated, satisfaction with her workload compared to that of other family members and feeling in control of her life. Interestingly, although wives on family farms experience work-role overload, they were satisfied with their time contributions to the home/farm situation.

The perceived balance between time spent on paid and household work appears to correlate with satisfaction with life. For example, a recent Canadian study (as cited by McGrath and Tschan, 2004) has shown that women were more satisfied if they spent more time at work and less on housework, while the reverse was true for men.

Another Canadian scholar, Juri Zuzanek (2004) demonstrated that feelings of time pressure are negatively associated with all aspects of well-being. In particular, time pressure weakly correlated with life satisfaction at -0.28, and moderately correlated with satisfaction with the use of non-working time ($r = -0.37$), and with satisfaction with work-family balance at -0.38. Furthermore, he finds that people in managerial positions working longer hours report higher satisfaction with work and less time crunch than those working shorter hours in low-choice and control occupations. He writes: "People can work longer hours without feeling 'time crunched' if they have freely chosen their work and are interested in it" (p.131). He concludes that the feelings of "time crunch" may be a better predictor of well-being than the actual number of hours worked.

This overview suggests that subjective factors of time use may often overcome the objective features of time, for example, even a little time spent in a personally meaningful activity may have a strong influence on one's well-being. Pentland et al (1998) indicates that a number of factors may be important in explaining the relationship between time use and well-being. Amongst these are perceived control over one's time, engagement in activity, balance and variety of activities, liking the activities one is engaged in, meaningfulness of activities and time anxiety. While there is no apparent linear relationship between time expenditure and well-being, there is likely to be a relationship between satisfaction with time use and well-being, or between certain aspects of subjective time use and well-being.

Relevance of this discussion to the research questions

Subjective time use has been examined through qualitative and questionnaire studies, which are the methods that the present research also intends to adopt. It is important to note, however, that by choosing to use research methods that focus on the subjective experience of time use, the researcher is not denying the existence or importance of the objective paradigm. It may well be, as Elliot's (1997) study suggests, that we need both objective and subjective perspectives in order to feel happy and satisfied with time.

Findings reviewed above have informed the research questions, which were expanded and developed to accommodate the concept of subjective experience of time use and also experience of time pressure/anxiety.

A number of factors of perceived time use were identified by previous research. It is not clear, however, which of these factors are more important for satisfaction with time use and whether there are other pertinent factors not yet identified by earlier studies. The present thesis hopes to shed more light on the factor structure of satisfaction with time use. In addition, it will address the question of whether time management skills/behaviours are important for satisfaction with time use, as earlier

results are inconsistent and require further investigation. On the basis of existing scarce findings, the researcher also intends to include a locus of control measure in order to investigate its relationship with satisfaction with time use.

The studies that comprise the last sub-section suggest a relationship between satisfaction with time use and well-being, which has a further bearing on the research questions. The revised research questions can be found at the end of Chapter 3.

2.4. Literatures not included in this review

The section below provides a brief outline of the literatures not covered in this chapter: work-life balance, time personality, time congruity, time urgency, polychronicity and time perspective.

2.4.1. Work-life balance

The area of work-life balance, concerned with enabling working people to effectively manage the demands of work and home undoubtedly touches on time use. Clutterbuck (2003) defines work-life balance as: a) being aware of different sometimes conflicting demands; b) having the ability to make choices in the allocation of time and energy; c) knowing what values to apply to choices and d) making choices. The concept of work-life balance is widely used in policy, managerial and organisational discourse. Its proliferation resulted in the introduction of family-friendly policies and other work-life balance initiatives in the work place, such as: flexible and part-time working; extended leave and other time off arrangements; increasing levels of family support (partner benefits, childcare facilities); subsidising private healthcare, etc (Woodland et al, 2003).

Although several studies reviewed in this chapter (e.g. Bonney, 2005; Tausig & Fenwick, 2001) come from this area, work-life balance was not included in the review for the following reasons: the concept of work-life balance is applicable only to those

currently in a work situation; time use is not the central point of this area; the focus of this thesis is primarily individualistic, whilst the focus of the work-life balance area is primarily on the organisational culture, policy , resources and working practices.

2.4.2. Time use and personality

Although potentially relevant for this thesis, the literatures on different aspects of personality responses to time were excluded from the review because of the dispositional nature attributed to personality characteristics. The topics/areas that were not covered are briefly introduced below.

Time personality

The dimensions of “time personality” were summarised by Francis-Smythe (1996) as: punctuality, planning, leisure-time awareness, impatience, and polychronicity. A related concept is that of *time congruity*, which refers to a good fit between a person’s and organisational time personalities (Kaufman et al, 1991). Personality types as measured by MBTI were found to correlate with certain time management behaviours/preferences (e.g. Williams et al, 1995; Hershey et al, 2000).

Time urgency

Time urgency has been identified as a core component of type A behaviour pattern, and shown to be a stable individual-difference variable. Time-urgent individuals are more time-aware, chronically hurried, trying to fulfil their ambitions, quite efficient, prioritise tasks and use deadlines as measures of time remaining (Waller et al, 2001). Time urgency is not the same as time anxiety or scarcity in that time urgency is a personality characteristic, whilst time anxiety or scarcity is a time-related experience, which appears more situational. Time anxiety may be a reflection of circumstances, feeling out of control, or fragmentation of time due to conflicting role demands (Zuzanek, 2004).

Polychronicity

Polychronicity and monochronicity refer to the styles of time use. Polychronic people are able to engage in many activities at the same time, whilst monochronic time use refers to coping with one task at a time. In the situation of multiple demands on time people may choose to adopt polychronic time use as an additional strategy for meeting them (Kaufman, Lane and Lindquist, 1991).

Time perspective

Time perspective represents an individual's cognitive way of relating to the psychological concepts of past, present and future, which affects decision making and subsequent actions (Boniwell, 2005). It is a powerful influence on many aspects of behaviour, attitudes and values, such as educational achievement, health, sleep and dreaming patterns, romantic partner choices and more (Zimbardo, & Boyd, 1999).

CHAPTER 2 SUMMARY:

- A historical perspective on time shows its evolution from a cyclical time based on natural processes and rhythms to a standardised clock-based time that became externalised and objectified through the processes of industrialisation and the affordability of time-measuring devices.
- Augustine and Newton argued the two diametrically opposite positions – that time is subjectively or objectively based – which have been central to the philosophical debate about the nature of time.
- Current conceptions of time are largely dualist, with clock-based, lifeless or chronos time on the one side and psychological, lived or kairos time on the other.
- Within the objective paradigm, time use research is well established in social science, which provides information on how people distribute their time over sets of

activities using instruments such as time diaries and experience sampling methodology, which have been shown to provide reliable and valid data.

- Time use data helped to identify inconsistencies between “time squeeze” or free time reduction as experienced by Westerners and the actual increase in free time as evident from the analyses of time use patterns.
- The focus on the objective time and its expenditure rather than on psychological time gives a poor representation of a) objective outcomes of activities; b) people’s psychological states; c) meaning people assign to the ways they spend their time; d) relationship of time use with constructs such as well-being
- Many researchers have emphasised the importance of utilising qualitative methodologies to explore subjective experience of time use. A small number of studies have used qualitative methodologies, of which Elliot’s (1997) research is particularly notable and acts as one of the main background materials for the current studies.
- Time management and various perceived time use inventories combined offer an array of subjective time use factors, which include: setting goals and priorities, mechanics/time utilisation, perceived control of time, preference for organisation/structured routine, time pressure/time anxiety, long-term personal direction/sense of purpose, personal consistency/persistence, time flexibility and present orientation. Certain other factors, identified in qualitative research, such as boundaries, openness, sense of closure, independence, internal time for processing, etc have not made their way into the existing inventories. Furthermore, it is unclear which ones of the above factors carry most weight, and whether there are any others not yet identified.
- Satisfaction with time use appears to significantly correlate with well-being.
- The last section briefly outlines the literatures not covered in this chapter, including work-life balance, time personality, time congruity, time urgency, polychronicity and time perspective.

CHAPTER 3: WELL-BEING LITERATURE REVIEW

What is the highest of all goals achievable by actions?...both the general run of man and people of superior refinement say it is happiness... but with regard to what happiness is, they differ.

Aristotle, *Nicomachean Ethics*, Book 1, Chapter 4

The aim of this chapter is to provide a review of well-being studies, which would assist the author in exploring well-being in relation to time use. Having addressed the definition of subjective well-being, the review will attend to its component parts of life satisfaction and affect, highlighting debates and controversies associated with measuring them. The definitions of all these terms will be provided. Next, some of the correlates and predictors of well-being will be examined, before considering a number of theoretical accounts of the interplay between hereditary, circumstantial and voluntary factors. Then a distinction will be drawn between hedonic and eudaimonic approaches to well-being, defining them and discussing the limitations and advantages of each. This distinction is of particular relevance to the research questions, because in considering a relationship between time use and well-being, it is important to understand what well-being is being measured. A subsequent discussion of qualitative studies on well-being will highlight an acute need for more research into what is meant by well-being, which will be reflected in the modified research questions. Finally, recent findings from the emerging research area of life goals/values and well-being are discussed and compared with relevant findings from the time use literature review to give rise to further research questions on the interplay between life goals and time use.

3.1. What is understood by the terms happiness and well-being

Aristotle defined happiness as a supreme good, the only value in life that is final and sufficient. Final in a sense that everything else is a means to the end, sufficient in that once happiness is achieved, nothing else is needed or desired (Diener, 1993). Happiness

has been a topic of interest for many centuries, starting from Ancient Greek philosophy, Post-Enlightenment West-European moral philosophy (especially Utilitarianism) to Humanistic psychology and current quality-of-life and well-being research in social, political and economic sciences (Veenhoven, 1991).

During the past thirty years and especially since the creation of the field of positive psychology in 1998, happiness and well-being have received considerable attention from theoretical and applied perspectives. Both cognitive and affective mechanisms of happiness have been well-studied, and a number of theoretical accounts have grown from these undertakings (Argyle, 2001).

It can be argued that the field of well-being is flourishing for many reasons. First of all, Western countries have achieved a sufficient level of affluence so that survival is no longer a dominating question in people's lives. With that, well-being is becoming more important than the issues of economic prosperity (Diener et al, 2002). Assessment of subjective well-being is receiving support because of the growing trends towards individualism. Finally, a number of valid and reliable measures have been developed, which allowed the study of well-being to establish itself further as a recognised discipline (Diener et al, 2002).

Amongst the many concepts that have much in common with the term happiness are self-actualisation, contentment, adjustment, economic prosperity, welfare, well-being, amongst many others. One of the classifications of well-being concepts has been developed by Veenhoven (1991) who organises them according to scope of influence (individual well-being, collective well-being and mixed conceptions) and objectivity/subjectivity principles.

The notion of *subjective well-being* (SWB) is a recognised research literature substitute to the more commonly used term happiness (Argyle, 2001). SWB is considered a multidimensional construct, which encompasses how people evaluate their own lives in terms of affective and cognitive explanations (Diener, 2000). SWB is not

the only conception of well-being currently offered in research literature (amongst psychological well-being, eudaimonic well-being, etc) but is probably the dominant one. The assessment of well-being is not an easy task (Myers and Diener, 1996) and there is insufficient consensus amongst researchers as to how it should be carried out.

3.2. Measuring Subjective Well-Being

Veenhoven (1991) poses the question of whether happiness can be measured objectively or only subjectively. He argues that it cannot be measured objectively because no overt behaviours are linked to happiness in a reliable manner. For example, an outgoing and friendly appearance, which is frequently observed among happy people, can also be present in unhappy people. This is probably why surveys are the main method used for studying SWB/happiness. Nobel prize winner Kahneman (1999), on the other hand, expresses dissatisfaction with the concept of subjective WB, arguing for an assessment of objective happiness instead, which could be derived from multiple records of life experiences over a period of time, averaged out. This way, happiness assessment does not need to be tied to memory and to retrospective accounts, and flooded with memory-reliant evaluations. “A ... task is to develop methods that minimize the biases of retrospective assessments in order to achieve a measurement of objective happiness that is at once valid and efficient” (Kahneman, 1999, p. 22). It is arguable, however, whether what Kahneman believes to be objective happiness is truly objective, as it still relies on people’s subjective judgement, even if in the moment.

Subjective well-being is traditionally approached in two ways. The first line focuses on *life satisfaction* or global subjective well-being, by asking people to rate it, as well as to rate the way their life is turning out. Ryff and Keyes (1995) trace this approach to the work of sociologists, and consider it to represent the cognitive component of well-being. Life satisfaction is a characteristic that appears to be relatively stable and consistent over time (Schmuck & Sheldon, 2001).

The second approach focuses on affect. The first studies of psychological well-being defined it as a balance between positive and negative affect (Bradburn, 1969). Later studies showed that positive and negative affect correlated with different predictor variables (Myers & Diener, 1996), and that they are only weakly (if at all) correlated with each other (Diener & Emmons, 1985). The current measures tend to view affective well-being as a combination of high positive and low negative affect, rather than the balance between these two variables. This finding of independence of positive and negative affect is significant for psychological interventions. Eliminating negative affect would not necessarily lead to an increase in positive affect, just as treating a problem would not automatically enhance happiness.

Even though common sense would suggest that happiness would be greatest when individuals experience the maximum amount of positive affect which is intense and only infrequent negative affect, Diener, Sandvik and Pavot (1991) demonstrate that this is not the case. They show that frequency of experience of positive affect is both necessary and sufficient for well-being, while an intense positive affect is not. It appears that intense positive affect comes with a price, as it usually effects the evaluation of subsequent (usually less intense) positive experiences.

Ryff and Keys (1995) argue, however, that frequency of positive and negative affect tend to correlate negatively, while intensity correlations are often positive, which creates an illusion that these components are independent. This measurement error may be concealing the bipolarity of positive and negative affect.

Although the affective and cognitive components of SWB are partly separable, Diener (1993) maintains that they correlate at levels sufficient to say that they are parts of a higher order construct of subjective well-being (see Figure 1 for a graphical representation).

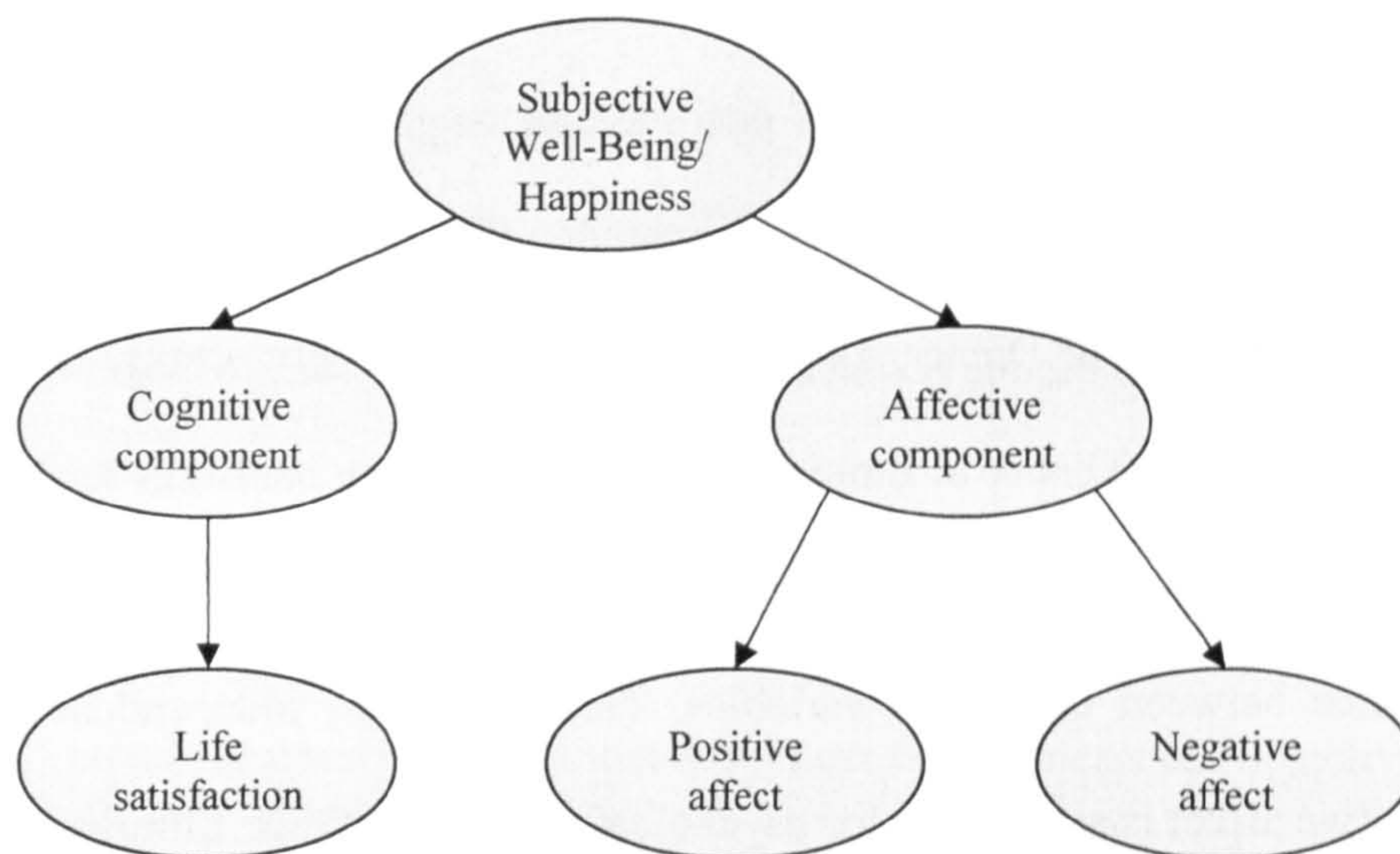


Figure 1: Affective and cognitive components of Subjective Well-Being (SWB)

One-item scales were the early instruments used for measuring well-being. Surprisingly, they possess a good degree of validity (Diener, Lucas and Oishi, 2002). However, since the separateness of three major factors (life satisfaction, positive affect and negative affect) was confirmed (Andrews and Withey, 1976; Lucas, Diener and Suh, 1996), multiple scales are used most often to measure the construct of well-being in its totality. A frequent measurement technique involves summing up life satisfaction with positive affect, and subtracting negative affect from the total.

Diener et al (1999) claim that many multi-item instruments possess adequate psychometric properties, including converging with alternative measures, exhibiting good internal consistency, moderate stability and some sensitivity to changing circumstances. Schwarz and Strack (1991), on the other hand, argue that measures of well-being show low test-retest reliability, usually around .40 and not exceeding .60 when the same question is asked twice during a time-limited interview. The majority of measures appear to be sensitive to time perspective, news events, seasonal variations, interview setting and procedures (such as the succession of questions) (Schwarz *et al*, 1988). According to the *judgement model of well-being*, if people are asked to evaluate their satisfaction with life as-a-whole, they are most likely to base their evaluation on

their current affective state. Only if they discredit their current mood, will they use comparison strategies to evaluate specific life domains. When using a comparison strategy, whatever information comes to mind first and appears relevant is used as a standard of comparison. Having formed a judgement on the basis of either comparison or affective state, respondents may or may not edit it before reporting it to a researcher (Schwarz and Strack, 1999). Tversky and Griffin (1991) present further evidence that judgements of well-being are very sensitive to comparison and contrast. Although a positive experience can make people happy, it can also decrease current well-being by diminishing the value of present experiences. On the other hand, remembering a negative event can make people appreciate their present and impact on their well-being judgement accordingly.

Schimmack, Diener, and Oishi (2002) attempted to integrate these two polar viewpoints by agreeing that people construct their life-satisfaction judgements bottom-up from accessible and relevant sources of information. However, these sources are chronically accessible and provide relatively stable information, due to their reliance on personality traits, which is why judgements are found to be quite stable over time. It is arguable, however, whether the judgement theorists find this integrative model acceptable, due to insufficient attention paid to temporary sources of information, varying between and within participants.

These differences between on-the-spot assessment of happiness and more enduring constructs, led Diener et al (2002) to argue for a distinction between momentary and global well-being. Momentary well-being (i.e. expressed through emotions experienced in the moment) can be assessed through the experience sampling method or even in laboratory conditions. Global well-being (i.e. when people summarise their life as a whole, which is more akin, though not identical to life satisfaction), on the other hand, is mostly assessable via self-reports and is, therefore, open to distortions from affective and situational influences. This distinction also

reflects the dual nature of well-being, which can be conceived both as a state (a transitory subjective experience responsive to momentary fluctuations of events and conditions) and a trait (a relatively permanent disposition).

Despite the debates in the field, SWB is mainly assessed via a battery of self-reports, involving measures of satisfaction with life and affectivity. This chapter will examine the component notions of SWB in more depth next.

3.2.1. Positive and negative affect

The notion of affect comprises both mood and emotions that are associated with experiencing of momentary events (Diener et al, 1999). Positive and negative affect constitute the emotional side of happiness, in contrast to the cognitive side represented by satisfaction (Argyle, 2001). Affect is studied experimentally, using the procedures of mood-induction, through experience-sampling methodology and via self-report scales.

Two dimensions of affect were proposed by Russell (1980) to include the happy-sad horizontal dimension and the aroused (tense/excited-relaxed) vertical dimension. The happy-sad dimension contradicts recent findings about the independence of positive and negative affect. Furthermore, Larsen and Diener (1987) argue that intensity is also of relatively little importance for the evaluation of positive affect because “extremely positive affect” is reported infrequently (only on 2.6% of days).

Joy is frequently mentioned as a dominant positive emotion but it is possible to distinguish a number of other positive emotions, including exhilaration, excitement, relaxed positive mood, flow and peak experiences (Argyle, 2001). It is important to consider not only positive emotions that include intensity but also those that are associated with depth. Keltner and Haidt (2001) emphasise that although at present there is no known taxonomy of positive emotions, they can be clustered into four categories, including resources (i.e. happiness and content), social relations (i.e. love and compassion), distress reduction (i.e. relief) and knowledge (i.e. amusement).

The broaden-and-build theory of positive emotions developed by Fredrickson (2001) helps to explain further the function of positive emotions. Negative emotions are known to be associated with specific action tendencies which are adaptive in evolutionary terms (i.e. fear results in a tendency to escape and anger – in a tendency to attack). While positive emotions are not associated with specific actions, the broaden-and-build model postulates that they increase the breadth of one's attention and thinking (e.g. joy leads to play and interest to exploration) and help build durable personal resources in the physical, social, intellectual and psychological domains. For instance, enjoyable times with friends increase social resources. The resources that are built by the broadened thought-action repertoires are enduring, even though the positive emotions are temporary. Finally, positive emotions can serve as antidotes to the lingering effects of negative emotions and enhance resilience.

PANAS (positive and negative activation) scales are the most frequently used measures of affect at present (Watson et al, 1988). However, they give a somewhat one-sided representation of positive affective experience of well-being, because of their bias towards activation and excitement. On close examination, we find the prevalence in the use of adjectives such as enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud, attentive at the expense of notions such as content, calm, serene, peaceful which are associated with the states of harmony and stability.

3.2.2. Satisfaction with life

While many models of SWB exist, most of these contain life satisfaction as the cognitive component of well-being. Life satisfaction, according to Veenhoven (1991) is “...the degree to which an individual judges the overall quality of his life-as-a-whole favourably. In other words: how well he likes the life he leads.” (p.10). One feels satisfied when there is little or no discrepancy between the present situation and what is thought to be the ideal or deserved standard.

Life satisfaction appears to be a unitary dimension, underlying satisfaction with different areas of life, which seems meaningful to people as a personality construct (Lewinsohn, Render and Seeley, 1991). Ratings of satisfaction with important domains, including self, marriage, family life, work, friends, etc have been found to be highly inter-correlated and are sometimes combined by various researchers to represent an overall life satisfaction.

The other side of life satisfaction is not depression, although the two are related. Even when the level of depression is controlled for, there is still sufficient variation in life satisfaction. However, life satisfaction can be used to predict depression, because low reported life satisfaction tends to precede the onset of the latter (Lewinsohn, Render and Seeley, 1991).

A number of cognitive models attempt to explain life satisfaction. Amongst these are comparison models which claim that people evaluate their lives on the basis of comparison between themselves and others. An elaboration of this is the *Michigan model*, according to which satisfaction is greater when achievements are close to aspirations (Michalos, 1985). However, raising aspirations may become difficult to match and achievement may fall short in the struggle to meet them (Schwartz, 2000).

The most commonly used measure of LS at present is the Life Satisfaction Scale by Diener et al (1985). Another well-known measure of the cognitive side of SWB is the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). In the UK, the 29-item Revised Oxford Happiness Scale (Argyle, 2001) is also widely used. It is significantly more detailed than its American counterparts.

3.2.2.1. Can life satisfaction be increased?

A number of theories would imply that it is impossible to permanently change someone's level of happiness. One of these theories, the so-called *zero-sum*, states that happiness is cyclical and that happy and unhappy periods follow each other. Any

attempt to increase happiness will soon be nullified by a consequent unhappy period (Veenhoven, 1991). Another theory claims that happiness is a fixed trait and is therefore not open to change. Although there is some support for this theory, happiness appears to be less stable during adolescence and early adulthood and can be affected by major life changes. Therefore, it may be more feasible to presume that happiness “tends to get” fixed, rather than is fixed from the very beginning (Veenhoven, 1991).

Adaptation theory predicts that although happiness reacts to negative and positive life events, it returns to its baseline shortly afterwards. Lottery winners soon return to their normal level of well-being and paraplegics and quadriplegics seem to adjust to their conditions and nearly come back to their previous levels of well-being (Seligman, 2003; Brickman, Coates, & Janoff-Bulman, 1978). Suh et al (1996) explored SWB in a two-year longitudinal study and found that only life events which occurred during the past two or three months influenced well-being. One of the interesting findings of this study was that good and bad events seem to co-occur within individuals’ life courses. There are certain conditions, however, (e.g. widowhood, loneliness and injustice) to which people never adjust completely (Veenhoven, 1991; Seligman, 2003). Adaptation theory seems to fail for those who are depressed or those who are above average in happiness despite living through adversity (Argyle and Martin, 1991).

Objective circumstances have little effect on life satisfaction. There is very little relationship between satisfaction and income, housing, education, sports facilities, crime prevention and housing. However, a number of aspects of life are strongly related to satisfaction, including marriage and other relationships, work and leisure (Argyle and Martin, 1991). The next section will examine correlates of well-being in more detail.

Relevance of this section to research questions

In answering the question what is the relationship between satisfaction with time use and well-being, we need to understand first what is meant by well-being. The dominant

paradigm of well-being sees it in terms of cognitive and affective explanations that comprise the concept of SWB. A distinction between global (long-term, stable) and momentary well-being may be of particular relevance to this thesis. One of the explanations offered by Lawton (1999) for the lack of relationship between (objective) daily time use and well-being refers to these notions as being incommensurate concepts (see Chapter 2, section 2.2.5). Indeed, it is not difficult to see why correlations of global well-being and daily (or moment by moment) time use produce negligible results. It is, however, reasonable to expect that moment by moment time use measures may be correlated with momentary well-being, and a number of research findings provide some support for it (see Chapter 2, section 2.2.5). Furthermore, it is possible to suggest that global well-being may show a relationship with more global time use measures (such as satisfaction with time use), because the latter is not limited to one day and is expected to be more stable. Thus only measures of global well-being will be used in this thesis.

Despite the problems with measurements discussed above, the SWB concept benefits from several well-developed and validated scales that will be utilised in this research.

3.3. Correlates and predictors of well-being

This section will consider some predictors and correlates of SWB. Although correlates are often considered to be the causes of SWB, the direction of the effects is often not clear. Furthermore, variations in well-being across time have seldom been explored. Studying these variations requires longitudinal and experimental studies which are quite rare in the field.

In considering the main correlates of well-being, attention will be paid to personality factors, social relationships, work and employment, before briefly discussing the patterns of relationships with other variables.

3.3.1. Social relationships

Social relationships appear to be the greatest single correlate of well-being (Argyle, 2001). Campbell et al (1976) demonstrated that family life and marriage (which are a part of social relationships) show the highest independent effect on overall satisfaction.

Spending time with friends is associated with the highest level of positive affect. The experience sampling study by Larson (1990) showed that people feel happiest when they are with friends, followed by being with family and being alone. Furthermore, satisfaction with friendships has been shown to correlate with life satisfaction at the level of about .30 to .40 (Costa et al, 1985). However, only close (with high level of self-disclosure) and personal friendships appear to be of importance, not the number of friends or the mere process of socialising (Wheeler et al, 1983).

The process of being in love heads the list of sources of positive emotions (Argyle, 2001). While the positive affect associated with love declines (though not disappears) over time, people in close personal relationships have a higher level of life satisfaction than those who are single, widowed, separated or divorced (Inglehart, 1990). A number of studies have shown that cohabiting people are on average less happy than those who are married (Inglehart, 1990; Stack & Eshleman, 1998). However, this finding is likely to be culture dependent (Diener et al, 2000).

Yet it is not merely the fact of being married that predicts happiness but the quality of marriage (Russell & Well, 1994). The factors that influence satisfaction with marriage include instrumental satisfaction (financial security and sharing of domestic tasks), emotional satisfaction (social support, intimacy and sex) and companionship in leisure. Marriage also seems to act both as a buffer against and as a means of overcoming mental and physical health problems. For instance, married people are 5.5 times less likely to be admitted to mental hospitals (Argyle & Furnham, 1983).

Marriage leads to an increase in SWB, which is rapid at first, but then sinks. Nevertheless, it does not return to the starting point but stays at a higher level than

before. Marriage, therefore, changes the set point of SWB even though the change is not large. Other findings indicate that people who are going to get divorced are unhappier three years prior to the event while those who are going to get married show a higher level of SWB five years in advance (Diener, 2001).

Families are the source of both positive and negative affect. As far as the satisfaction with life is concerned, children have a zero effect on the happiness of their parents, although they do have an effect on the meaningfulness of one's life (Veenhoven, 1994). Furthermore, having young (under-five) and adolescent children leads to a decline in marital happiness (Walker, 1977).

Diener and Seligman (2002) in their study of exceptionally happy people (upper 10 percent of 222 college students) found only one main difference between the happiest and the rest of the students. The very happy people had a rich and fulfilling social life. They spent the least time alone, had good relationships with friends and had a current romantic partner. They did not have less negative and more positive events, nor did they differ on amount of sleep, TV watching, exercise, smoking, drinking, etc.

3.3.2. Work and employment

It appears, on the basis of comparison between various international, American and British-based surveys that between 30 and 40% of people really like their jobs, a similar percentage are satisfied, while 25-30% are not (Argyle, 2001). It is hardly surprising that satisfaction with work is related to satisfaction with life (Warr, 1999) and that both have been found to have an effect on each other, although life satisfaction shows a greater effect (Headey & Wearing, 1992; Seligman, 2003). Some show that pay does not have a strong relationship with job satisfaction, while good relationships and work content do (Clark, 1998). The nature of the job seems to have a curvilinear relationship with well-being according to Warr (1999). His *vitamin model* of employment proposes that some of the features of work (pay and physical conditions) increase well-being to a

point where it can no longer be affected by these factors, similarly to the function of vitamins C and E. Other features – opportunity for control, skill use, job demand, variety, environmental clarity and opportunities for interpersonal contact – act as vitamins A and D; in that too much of these can actually decrease well-being. Warr demonstrates that greater employee well-being is significantly associated with better job performance, lower absenteeism, reduced probability of leaving an employer, and the occurrence of more discretionary work behaviours (1999).

Job satisfaction is adversely affected by role-conflict, such as conflicting demands of work and family. This role-conflict is largely manifested in dual-career families and is especially detrimental for young women with children working over 25 hours a week (Haw, 1995; Zuzanek, 2004).

Jahoda (1981, 1982) argues that work provides people with five categories of experience essential for well-being: time structure, social contact, collective effort or purpose, social identity/status and regular activity. Her studies are amongst a few that looked at the variable of time in relation to well-being (through employment, in this instance). Her claim of the necessity of time structure for well-being has formed the basis of Bond and Feather's (1988) Time Structure Questionnaire, discussed in the previous chapter (section 2.3.2).

Unemployment has a strong negative effect on all aspects of happiness, including positive affect, negative affect and life satisfaction. Unemployment affects mental stability, physical health, self-esteem, feeling of control, leisure patterns, social contacts, not to mention financial situation, etc. Retirement, on the other hand, despite sharing some features with unemployment (such as the actual absence of employment), is associated with very different outcomes in terms of well-being. The well-being of the retired is, on average, greater than of those at work (by up to a quarter of standard deviation) but that differs depending on the nature of the previous employment and on the level of income of the retiree (Argyle, 2001).

3.3.3. Personality factors and individual differences

Argyle (2001) emphasises that one of the best predictors of happiness is extraversion. This effect may be due to choice of more socially based and physical activities, using more positive non-verbal expressions and more socially enhancing behaviours (Watson and Clark, 1992). On the other hand, neuroticism has strong and pervasive associations with various measures of negative affect (Watson and Clark, 1992). Diener and Lucas (1999) do not consider these findings surprising as extraversion is characterised by positive affect, whereas neuroticism is consistently negatively associated with it.

Happy people tend to be *optimistic*, “look at the bright side” (the “Pollyanna” principle), have a more positive view of others, have more positive associations and employ successful coping strategies (Argyle and Martin, 1991). Another correlate of happiness is attribution style. Happy people interpret bad events as external, situational and unstable. On the other hand they interpret positive events as internal, global and stable (Seligman, 2003). Veenhoven (1991) shows that personal characteristics common in happy people include: identity integrity, inner control, ego-strength, mental maturity, social ability, activity and perceptual openness. Diener and Lucas (1999) note that self-esteem is a stable correlate of well-being, although the direction of causality is not determined.

Taylor and Brown (1988) picture happy people as continuously engaged in the distortion of reality in three different ways: having an unrealistically positive view of themselves, an exaggerated belief of control over their lives and improbable optimism. People who are pessimistic and unhappy tend to judge things more accurately.

In their meta review on the correlates of well-being DeNeve and Cooper (1998) examined 137 distinct personality constructs. They found personality to be predictive of subjective well-being, happiness and positive affect, but less so of negative affect. Defensiveness, trust, emotional stability, locus of control, desire for control, hardiness, self-esteem and tension were most closely associated with SWB. When personality

traits were grouped according to the Big Five traits, neuroticism was the strongest predictor of life satisfaction, happiness, and negative affect, whilst extraversion and agreeableness predicted positive affect.

An interactionist model according to which personality is related to how people spend their time was examined by Diener, Larsen and Emmons (1984). Some of the personality traits (such as extraversion and a need for order) predicted spending more time in relevant situations (social as opposed to lone and typical as opposed to novel respectively). However, individuals did not spend more time in situations where they experienced more positive emotions, nor less time in those settings where they experienced less positive affect. This pattern reflects the paradoxes identified in time use research, when most time is spent in activities not conducive to well-being (see Introduction and chapter 2).

Diener and Lucas (1999) classify theories offering empirical support and explanation for relations between personality and well-being into five categories:

1. Temperament models: Set-point theories claim that individuals have emotional set points to which they return soon after experiencing events. Behaviourist theorists argue that temperament leads to behaviours that are conducive to SWB.
2. Congruence theorists posit that high SBW is experienced when there is a good fit between personalities and environment.
3. Cognitive theorists believe that SWB is determined by the way we process information about rewards and punishments.
4. Goal models place an emphasis on how we select and attain our goals.
5. Emotion socialisation models postulate that classical conditioning, instrumental learning, imitation, etc. lead to differences in experiencing and expressing affect.

3.3.3.1. Sense of coherence

Another interesting correlate of well-being is a construct known as *sense of coherence* (SOC). Antonovsky (1979) originally developed it in an attempt to understand why some people are less likely to be affected by stressful environments than others. At the point of its discovery SOC represented a departure from a pathological perspective dominant in medical and social sciences (Antonovsky, 1993). SOC has been conceptualised as a global orientation indicating the extent to which a person has confidence that internal and external environments are predictable and there is a high probability that life situations will work out as well as can be expected. This construct has three components: comprehensibility (a person's insight into their achievement and difficulties), manageability and meaningfulness, and is based at least partly on the idea that those who find meaning in life or in events are likely to be psychologically healthier than those who do not.

Antonovsky (1987, p.19.) himself defines the sense of coherence as "...a global orientation that expresses the extent to which one has a persuasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; (3) these demands are challenges, worthy of investment and engagement". Describing interrelationships among the three components of the SOC, Antonovsky emphasises meaningfulness, as it is through it that motivation is mediated (Korotkov, 1998). Next in the hierarchy is comprehensibility, which is followed by manageability. The SOC is a rich concept and includes the elements of hardiness, self-efficacy and locus of control (Linley, 2003). It is, however, seen as more universally meaningful than the abovementioned constructs (Antonovsky, 1993). There exists a substantial empirical and theoretical support for its nature as a unitary construct (Antonovsky, 1987, 1993), which is to be expected, considering how systematically the scale was developed.

A SOC usually develops by around age 30. The more one's experiences are characterised by consistency, participation in shaping outcome, and balance of stimuli (rather than overload or underlay), the more one is likely to see the world as coherent.

Not surprisingly, SOC shows consistently high associations with well-being and life satisfaction, in the region of .54 to .64 (Larson & Setterlind, 1990; Ryland & Greenfield, 1990; Sagy et al, 1990).

It is possible to conceive of SOC as a personality characteristic or coping style (Antonovsky & Sagy, 2001). In this respect, the SOC has implications for responses to different types of stress situations, and may even have direct implications for the research questions of this thesis. As time use often causes stress and anxiety, it might be possible to assert that SOC can assist in coping with time-related stress. Antonovsky and Sagy (2001, p.215) write: "If the SOC is conceptualised as a coping mechanism characterised by the tendency to see life as predictable and manageable, a person with strong SOC is less likely to perceive many stressful situations as threatening and anxiety provoking than one with a weak SOC". Shahani et al. (1993) examined the relationship between time management behaviours with sense of coherence, and found the reported use of time management behaviours to be unchanged under varying levels of stress due to stability of SOC. Given a high level of correlations between SOC and well-being and a somewhat unique standing of SOC with respect to stress, it was decided to utilise the SOC scale in this thesis as one of the well-being measures.

3.3.4. Other correlates of happiness

A commonly held view that money can buy happiness (most people think that a little more money would make them a little happier, Myers, 2000), is not supported by evidence. Wealthy people are only somewhat happier than poor people, but this correlation is very low once the basic needs are met (Heady and Wearing, 1992; Myers, 2000). Social class has some effect (independent of money) on happiness through

lifestyle differences and better coping methods (Argyle, 2001). Education has a very weak relationship with SWB, which is stronger in poorer nations (Diener et al, 1999).

Although women experience more depression than men and report more negative affect, they also report more frequent and more intense levels of positive affect and life satisfaction, thus arriving at a similar level of well-being to men (Diener et al, 1999). Subjective well-being, especially life satisfaction, marginally increases rather than decreases with age (Diener et al, 1999), whilst both positive and negative affect declines (Diener & Lucas, 1999). Although self-rated health shows moderate correlations with SWB (at 0.32, Okun & George, 1984), when health is rated by others (e.g. doctors), the correlation drops (to 0.16). This indicates that it is a subjective construal of one's health that is associated with subjective well-being.

A number of large-scale studies have shown significant correlations between SWB and religion, which appears to provide psychological and social benefits such as meaning in life, collective identity, social support and assistance in major life crises (Diener et al, 1999; Myers, 2000). These findings, however, are based on studying a particular religious perspective, namely Christianity. It is unclear whether these can be generalised to other religions such as Buddhism or Islam, and especially to spiritual beliefs that are not necessarily embedded in a particular religious tradition.

Leisure (especially sport, exercise and belonging to leisure groups) shows significant positive correlations with positive affect, with mental and physical health and to a lesser extent with life satisfaction (Argyle, 2001). Csikszentmihalyi and Mei-Ha Wong (1991) demonstrate that the highest level of happiness is reported when respondents are in the flow state (when high skills are matched with high challenges).

Relevance of this section to research questions

It can be noted from the above overview of correlates, that time use or time management do not feature in any major review, although a few studies on the

correlates of well-being contain some references to time use (e.g. Jahoda, 1981, 1982; Haw, 1995; Argyle, 2001). There are two possible explanations for the lack of studies on this subject: either well-being theorists have not carried out any studies on the relationships between time use and well-being, or no relationships have been identified. The lack of studies supports the case for the empirical work on time use and well-being in this thesis. It is important to mention that from the perspective of time use theorists the situation is less alarming, as a number of studies that considered the relationship between subjective time use and well-being have been identified and discussed in the previous chapter, with satisfaction with time use emerging as a correlate of subjective well-being (see section 2.3.3). Nevertheless, both a limited number of such studies and inconsistency in well-being measures used, highlight the need for further research. The current thesis intends to address this need.

3.4. Theoretical accounts of the interplay between hereditary, circumstantial and voluntary factors

Although there is a considerable degree of similarity between accounts of different prominent researchers on what contributes to happiness, the picture is still far from straightforward. Schwartz and Strack (1991) argue that most objective circumstances account for less than 5 percent of variance in well-being, while the combination of life circumstances in numerous major domains of life still accounts for no more than 10 percent.

Since research findings indicate that individuals experience relatively stable levels of life satisfaction and affect across different life domains, genetic and personality predisposition theories would argue that this consistency may be explained by a substantial genetic component. Studies of identical twins reared separately show that approximately 50% of emotionality can be predicted by genetic variation (Tellegen

et al, 1988). As discussed above, certain personality traits are strongly and consistently predictive of SWB (Diener et al, 1999).

Seligman (2003) introduces an equation of happiness which is intended to account for the interplay between different contributors to one's well-being, including personality and other genetically determined, known correlates and individual's mindset: $H = S + C + V$, where H is an enduring level of happiness, S is a set range, C are the circumstances and V are the factors under voluntary control. S is a genetically determined level of happiness, which remains relatively stable throughout the life span and returns to its original point soon after the majority of significant life events (such as winning the lottery, getting fired or promoted, even spinal cord accidents). Circumstances (C) include the correlates of SWB considered above: living in a wealthy democracy, getting married, having a rich social network, being religious and avoiding negative events and emotions. Money (once a person is above poverty level), health, education, race or climate have no effect on happiness. Finally, factors under voluntary control (V) include positive emotions which can be modified using one's cognitive and emotional resources. This latest component of well-being is supported by Sonja Lyubomirsky's (2001) research. She advocates a *construal theory* of happiness, according to which, happy and unhappy people have been shown to differ systematically in the particular cognitive and motivational strategies they use. Thus happy individuals construe life events in ways that help maintain and promote their happiness and positive self-valuations, whereas unhappy individuals utilise the alternative approach. This theory emphasises the importance of attitudes and choices, rather than circumstantial variables, for well-being.

Headey and Wearing (1991) too offer a model aiming to account for both stability and changeability of well-being. They propose a metaphorical model of well-being represented in economic terms as *stocks and flows*. Empirical evidence for this model comes from a large longitudinal study. *Stocks* are stable personality

characteristics, such as social background (sex, age, socio-economic status), personality traits (extraversion, neuroticism, openness), and social networks (intimate attachments and friendships) (other stocks of potential importance include facilities for living, work and leisure, skills and abilities, etc). *Flows of psychic income* are favourable or adverse life events which either cause satisfaction or distress. The stocks and flows model of well-being claims that well-being is a stable characteristic because stock level, flow level and resulting well-being are in dynamic equilibrium. Stability or equilibrium of well-being is due to stable stocks, which also predispose a person to have constant amounts and certain types of life events. Four distinct scenarios can be distinguished here. The feature that they have in common is that history tends to repeat itself. Some people experience many positive events and few negative ones; others have a reverse pattern. Other people experience a significant number of both satisfying and distressing events, while the fourth group has a few experiences of either kind. Change of well-being occurs when there is a significant deviation in life events (flows) from the typical pattern that a person already has. Thus only this deviation from the normal pattern, not the life events per se, is responsible for a long lasting change in well-being. This is an interesting model which does explain the fact that happiness appears to be a stable characteristic which is open to change nevertheless.

Relevance of these accounts to the research questions

With regard to the above discussion, a question of whether time use belongs to the circumstantial or voluntary category of factors can be raised. It is likely that satisfaction with time use belongs to the factors under voluntary control, because, for example, we can make certain temporal choices that can affect our time use satisfaction as a whole. In this case it is likely to play a noteworthy role in affecting well-being. Objective time use, on the other hand may be viewed as a component part of our circumstances.

3.5. Critique of traditional approaches to SWB

The traditional approaches to well-being, encompassing life satisfaction, positive and negative affect, are subject to a number of conceptual criticisms, which maintain that focusing on life satisfaction and emotions gives a one-sided representation of well-being. Ryff (1989a), for example, believes that it is better to feel unhappy than not to have a purpose in life. Ryff and Keyes (1995) argue that well-being research has failed to deal with the question of what it actually means to be well psychologically. They point towards the lack of debate on whether the existing measurements actually capture the richness of human wellness and happiness. They attribute this failure to the facts that life satisfaction measures were originally generated as outcomes measures, are essentially data driven, and are not based on a clear conceptual framework.

A number of theorists also express dissatisfaction with the current conception of well-being. McGregor and Little (1998) claim that contemporary literature on well-being largely ignores the contributions of humanistic and existential approaches to this concept, thereby sidetracking the role of meaning. Indeed, current theories, with some notable exceptions, rarely mention previous extensive literature on the subject of positive psychological functioning, which includes Maslow's (1968) conception of self-actualisation, Rogers' (1961) notion of the fully functioning person, Jung's (1933) formulation of individuation, Allport's (1961) conception of maturity, Erickson's (1959) psychosocial stage model, Jahoda's (1958) positive criteria of mental health, etc (Ryff, 1989a). Similarly, Vitterso (2003) points out that this construct does not do justice to the complexity of philosophical conceptions of happiness and fails to explain the dimension of personal growth. Having thoroughly reviewed the existing research on theoretical conceptions of well-being, Ryan and Deci (2001) question the validity of SWB as an operational definition of well-being, rather than merely hedonism, and, consequently, the types of activities and goals theorised to promote well-being.

In response to such criticisms, Diener, Lucas and Oishi (2002), the proponents of the “traditional” viewpoint, would maintain that their approach to well-being is so widely recognised because it is democratic. Respondents are evaluating their lives themselves; they are not assessing it on the basis of what someone else believes to constitute their happiness. Therefore, this approach to well-being allows people to tell researchers what makes their life good.

Relevance of this debate to the research questions

This section queries whether subjective well-being is an adequate representation of what it means to be psychologically well. It appears that the notion of subjective well-being does not tackle questions of personal growth/development, of purposefulness or meaningfulness that seem paramount to a life well-lived. With that in mind, a question can be raised of whether in considering a relationship between satisfaction with time use and well-being SWB can be seen as an appropriate outcome of time well spent?

3.6. Hedonic and eudaimonic paradigms of well-being

The criticisms raised in the last section reflect the growing division between hedonic and eudaimonic approaches to well-being. Ryan and Deci (2001) suggest that there are actually two separate philosophies of well-being, of which one revolves around hedonism, pleasure and happiness, while the other is more concerned with the actualisation of human potential

The hedonic view can be traced to Aristippus, a Greek philosopher who believed that the goal of life is to experience maximum pleasure (Ryan and Deci, 2001), and further on to DeSade and Utilitarian philosophers. Defined broadly, “Hedonic psychology ... is the study of what makes experiences and life events pleasant and unpleasant. It is concerned with feelings of pleasure and pain, of interest and boredom,

of joy and sorrow, and of satisfaction and dissatisfaction” (Kahneman, Diener and Schwarz, 1999, p. ix).

Current measures of well-being seem to reflect the broad conception of hedonism. Although viewed widely and not reduced to physical hedonism, well-being is defined in terms of maximisation of pleasure (or positive affect) and minimisation of pain (negative affect). Having reviewed a number of studies, Vitterso (2003) shows that structural validation of the SWB components (satisfaction with life, positive and negative affect) confirms that all these fall under the influence of one higher-order factor of hedonism, which he describes as a tendency to evaluate oneself and one’s environment in terms of goodness and badness. During the past two decades hedonic well-being has reigned as an operational definition of well-being.

Aristotle was the originator of the concept of eudaimonia, which literally means “good spirit”. He conceived that true happiness is found by leading a virtuous life and doing what is worth doing. This approach maintains that not all desires are worth pursuing, even though some of them may yield pleasure, they would not produce wellness. This idea was further developed in history by prominent thinkers, such as John Locke and Stoics. The ideas of humanists, such as Maslow (1968) and Rogers (1961) also reflected eudaimonic ideals. A number of modern theories of well-being come under the broad umbrella of eudaimonia. Amongst these are psychological well-being (Ryff & Singer, 1998); self-determination theory (Ryan & Deci, 2000) and various other wellness ideas. These and other eudaimonic theories are considered in more detail below.

Waterman (1993) was amongst the first to introduce (or re-introduce) the notion of eudaimonia into contemporary psychological literature. He explains daimon as the potentialities of each person, the realisation of which leads to the greatest fulfilment. Efforts to live in accordance with one’s daimon, and the congruence between people’s life activities and their deep values, lead to the experience of eudaimonia.

A concept of *psychological well-being* (PWB) is widely advocated by Carol Ryff (e.g. Ryff & Keyes, 1995; Ryff & Singer, 1998). She defines well-being as “the striving for perfection that represents the realisation of one’s true potential” (1995, p.100). Ryff and Keyes’s (1995) conception of well-being was derived from a comprehensive analysis of various approaches to happiness and offers six components which include: *self-acceptance* (positive evaluation of oneself and one’s life), *personal growth*, *purpose in life*, *positive relations with others*, *environmental mastery* (the capacity to effectively manage one’s environment) and *autonomy*. Their studies provided empirical support for this six-factor model with the emergence of a single higher factor. Keyes, Shmotkin and Ryff (2002) hypothesised that SWB and PWB, although conceptually related, are empirically distinct conceptions of well-being. Factor analysis of the data from over 3,000 respondents confirmed that SWB and PWB are two correlated but distinct factors, and that they show a different pattern of relationships to demographic and personality variables. A number of researchers, however, are critical of these dimensions. Vitterso (2003), for example, notes several findings suggesting that Ryff’s six dimensions can be accounted for by only two factors corresponding to hedonic and eudaimonic WB. It could be argued further that although the components of well-being derived by Ryff and Keyes (1995) are grounded in theoretical literature, they still are still relatively arbitrary and are not based on any qualitative empirical work.

The *self-determination theory* (SDT), developed by Ryan and Deci postulates the existence of three inherent psychological needs – competence, autonomy and relatedness – which when satisfied, enhance motivation and well-being and when limited, impact on well-functioning (2000). A number of studies (e.g. Sheldon et al, 2001) provide support for the claim that these three needs are the most basic ones, although self-esteem is also frequently mentioned. The difference between PWB and SDT Ryan & Deci (2001) see is that autonomy, competence and relatedness foster well-being in their model, whereas Ryff uses these concepts to define well-being.

Csikszentmihalyi's (1992) concept of *flow* is another attempt to define eudaimonic happiness. Flow is an optimal state between boredom and anxiety, when a high challenge is met with an appropriately high level of skill. It is typically described as: "Your concentration is very complete, your mind isn't wandering, you are not thinking of something else; you are totally involved in what you are doing" (Csikszentmihalyi, 1975, p.39). The following characteristics of flow have been identified: merging of actions and awareness; focusing of attention; forgetting the self; receiving clear feedback; distortion of time; an autotelic nature of experience. Csikszentmihalyi argues that creating opportunities for flow would lead to enhanced happiness (1999).

Seligman (2003) distinguishes between the pleasant life, good life and meaningful life in his attempt to develop a theory of *authentic happiness* accounting for both hedonic and eudaimonic aspects. The pleasant life is devoted to the pursuit of positive emotions, and can be paralleled with hedonic well-being. In the good life one would use their dominant character (or so-called signature) strengths to obtain gratifications (which are activities we like doing, akin to flow). Finally, meaningful life is defined as using your signature character strengths in the service of something greater than yourself. Huta *et al.* (2003) hypothesised that both pursuits of engagement/flow and of meaning in Seligman's model can be viewed as eudaimonic. They compared these eudaimonic pursuits with pleasure/hedonic pursuits in relation to life satisfaction. It emerged that life satisfaction was positively related to eudaimonic pursuits and only weakly positively related to pleasure, whilst positive affect was more strongly related to the hedonic pursuits.

Figure 2 offers a graphic representation of the hedonic and eudaimonic paradigms.

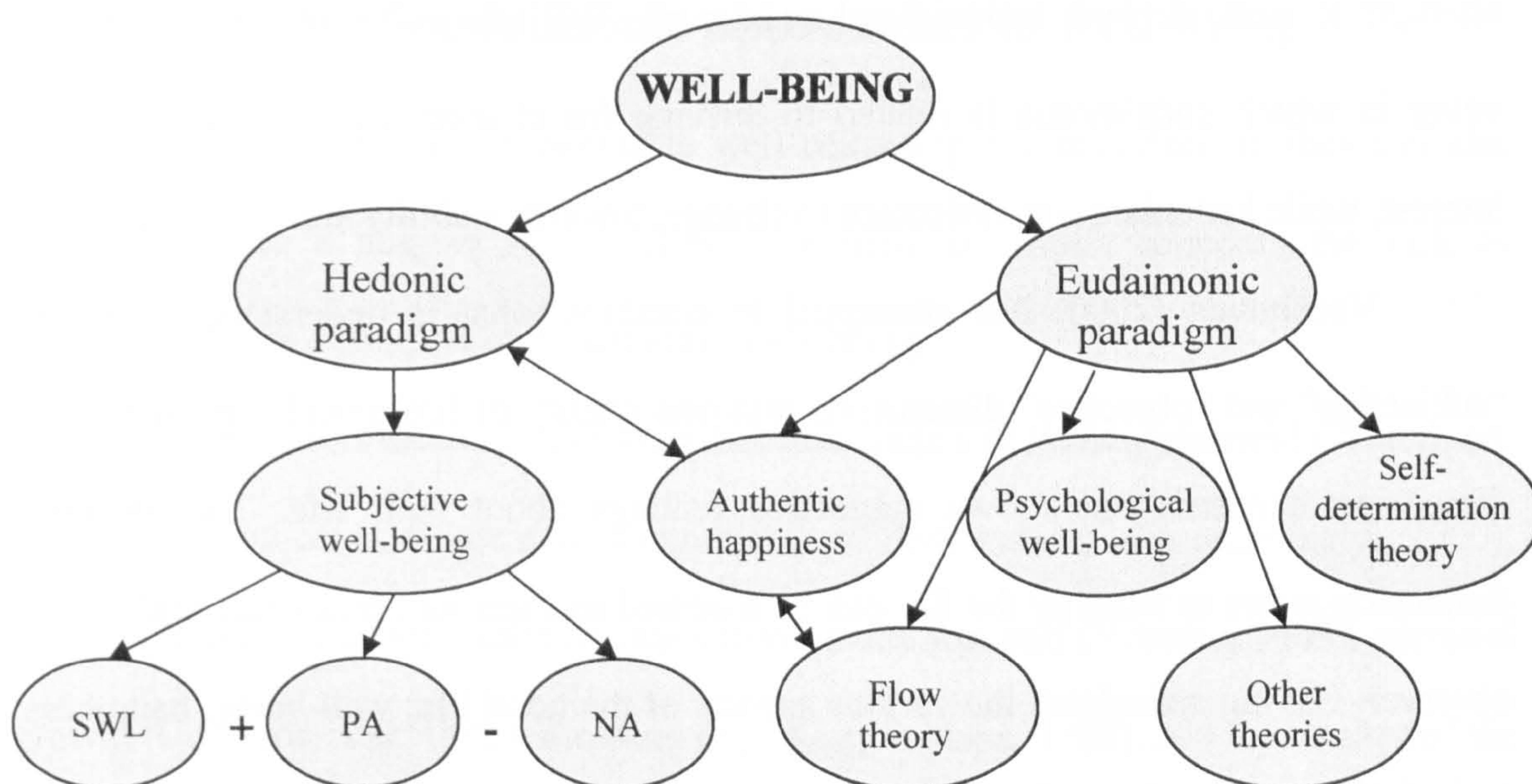


Figure 2: Hedonic and eudaimonic paradigms of well-being.

It is possible that well-being is best conceived as a multidimensional construct. Indeed, Compton et al (1996) identified two main factors out of 18 indicators of well-being, one representing happiness/SWB, and another – personal growth. Measures of SWB related to a factor different from that of personal growth constructs which included maturity, self-actualization, hardiness, and openness to experience. King and Napa (1998), and McGregor and Little (1998) independently find two factors representing well-being as a whole – happiness and meaning or meaningfulness.

Similarly to Waterman (1993), who found that hedonic measures were associated with drive fulfilment, being relaxed, and away from problems, and eudaimonic measures – with growth, development, challenges and efforts, Vitterso (2003) argues that hedonism motivates people to perceive their internal and external environments in stable ways, while eudaimonism motivates people to understand themselves and the universe by expanding their knowledge structures. He further finds that in challenging and unstable situations individuals high on eudaimonic well-being experience more positive affect. On the other hand, in stable and goal facilitating situations, participants with high hedonic WB show more positive affect. Vitterso

attempts to combine both hedonic and eudaimonic WB into a *dynamic model of well-being* in which eudaimonia is related to striving for change, novelty, curiosity and interest, while hedonism – to resistance to change, towards stability and familiarity.

Veenhoven (2000) has attempted to combine what is understood under the “subjective” and “objective” dimensions into one quality of life model. The subjective dimension concerns one’s own subjective feelings about their life. The objective dimension refers to whether the life can be assessed as meeting certain standards by an observer. Having articulated the various aspects of the good life, well-being, happiness, and similar terms, he ordered these concepts along two dichotomous dimensions implying four qualities of life: 1) liability of the environment (living conditions), 2) life-ability of the individual (physical and mental health, self-actualisation, art of living); 3) external utility of life (objective life results, virtue, moral perfection); 4) inner appreciation of life (inner outcomes of life, that are often understood as subjective well-being). These qualities are independent and cannot be added. Life-ability and external utility of an individual can, perhaps, be loosely equated with eudaimonic well-being, while inner appreciation of life – with hedonic. It is, perhaps, important to note at this point that although several other (e.g. Lane, 1996; Kuh, 2002) quality of life models may be considered here, they are, by and large, not discussed in this chapter, because quality of life research tradition is generally concerned with more objective and communal factors, whilst well-being tradition tends to deal more with subjective and individual factors (Haworth, 2004).

Relevance of the eudaimonic paradigm to the research questions

Having distinguished between the hedonic and eudaimonic paradigms of well-being, it is, perhaps, possible to expand the research questions to examine the relationship of satisfaction with time use with both aspects of well-being. The next section will consider whether such an expansion is feasible.

3.7. Criticism of eudaimonic approaches to well-being

Although the eudaimonic approaches to well-being expand its definition, they can also be subjected to a number of criticisms, the main of which concerns the lack of consensus on the definition of eudaimonic well-being.

Some authors define eudaimonia as actualisation of human potential (Waterman, 1993), while others associate it with experience of flow states (Csikszentmihalyi, 2000). Other definitions include: realising one's true nature/ true self (Vitterso, 2003), personal growth (Compton et al, 1996), meaning (e.g. King & Napa, 1998), and the totality of six factors comprising psychological well-being (Ryff and Keyes, 1995). Seligman defines eudaimonia as both flow and meaning. Huta *et al.* (2003, p.1) summarise eudaimonia as an "effortful engagement in life activities, developing the best in oneself, and belonging to and serving institutions larger than oneself".

Clearly, these definitions, although not contradictory, are lacking conceptual unity. Meaning may be found in personal growth, yet it may also be found in interpersonal or social domains, which means that the two cannot be identified. Interestingly, Ryff (1989a) and Ryff and Keyes (1995) distinguish between the meaning and personal growth dimensions of well-being. Despite their attempts to shed light onto the construct of well being, eudaimonic definitions complicate the picture further. This is reflected in the wide range of instruments used to measure eudaimonic well-being, which range from self-actualisation and flow scales, to openness to experience and a need for cognition inventories. Even at the level of common sense, it is reasonable to suggest that openness to experience is needed not only in order to grow but to experience pleasure, which is a facet of hedonic WB.

Furthermore, it is questionable whether, for example, a Need for Cognition Inventory (Vitterso, 2003) is sufficient for measuring such complex processes as development. Popovic (2005) summarises the indicators of development as increases in: complexity and differentiation (e.g. ability to adopt various perspectives); organisation

and integration; flexibility; refinement (e.g. sensitivity to nuances); mobility and dynamics (e.g. curiosity); self-control; perspective (e.g. considering long term plans); productivity; diversity and versatility (e.g. having a variety of interests, knowledge or skills). Neither one indicator on its own is considered to be necessary or sufficient. The attempts to measure development through one indicator seem to be a simplification.

Although life satisfaction seems to be allocated into the hedonic camp by the proponents of the eudaimonic paradigm, it is also debatable whether this needs to be the case. Life satisfaction can be conceived as an independent subjective evaluation of the current status of one's life, which can be hedonically or eudaimonically oriented. It is consistent with the findings of some goals theorists (e.g. Oishi *et al*, 1999), who placed the greatest emphasis on the congruence between values and subsequent goals and activities, that valuing and successfully carrying out hedonic pursuits may yield a similar level of life satisfaction to a corresponding eudaimonic pattern.

Despite the confidence of well-being scholars, it appears that the consensus about the definition of well-being is far from having been reached. The hedonic paradigm can be charged with ignoring the roles of personal growth and meaning, while the eudaimonic one - with a lack of shared understanding of what well-being entails. Given how frequently subjective well-being measures are used as outcome variables in modern psychology, it is essential that effort is invested into finding a common non-reductionist definition of this complex construct and developing adequate instruments to assess well-being in its complexity.

Relevance of these criticisms to the research questions

The last section demonstrated that what is understood under eudaimonic well-being is unclear at present. Not only is there a lack of conceptual definition, there is also a lack of adequate instruments designed to measure eudaimonic well-being. As development of such measures is beyond the scope of this thesis, it would not be possible to

investigate the relationship between satisfaction with time use and eudaimonic well-being using quantitative research methodology. Nevertheless, it might be possible to address this relationship somewhat during the qualitative study and analysis. Furthermore, the first study intends to tackle afresh the question “What is meant by well-being”?, the analysis of which may bring up issues akin to those discussed above.

3.8. Qualitative studies of well-being

Quantitative approaches to measuring well-being have been criticised since the late 1970s as to the lack of conceptual clarity of what is meant by terms such as life satisfaction. However, most often these criticisms resulted in the refinement of measures rather than a reconsideration of approach (Thomas and Chambers, 1989). Even though Diener himself (1993) emphasises the value of qualitative approaches to well-being in developing new measures, up to date a relatively small number of such studies have been carried out.

Thomas and Chambers (1989) obtained some qualitative data in an interview study of the accounts of well-being of Indian and English elderly men. The dominant themes for the English sample were fears of: incapacitation, becoming useless and dependent, and loss of significant others. The main themes from the Indian sample were importance of family, salience of religious beliefs, and satisfaction with their present life situation. Although quantitative measures yield similar results for both samples, qualitative analysis indicates the enormous difference in the actual experience of well-being. They conclude the paper with the words of Campbell (1979, p.66): “Qualitative common sense knowing is not replaced by quantitative knowing. Rather, quantitative knowing has to trust and build upon the qualitative”

Studying lay conceptions of well-being (Ryff, 1989b) found a commonality in the endorsement of good relationships and enjoyable activities amongst the diverse age groups of 171 participants. However, younger adults focused more on self-knowledge,

confidence and self-acceptance, while older adults – on positive coping with change. This finding, once again, places relationships into the centre point of well-being.

Sastre (1998) interviewed 490 French, aged between 9 and 85, asking a single question: “What does well-being mean to you?” The answers were categorised on the basis of the work of Diener and Ryff, by specifying a domain (family, friends, work, etc) and a psychological dimension of WB (acceptance, etc). This means that the categories were derived top down. The most frequently used categories (domains and dimensions) were family, one’s physical body, relationships and acceptance.

Westerhof et al’s (2001) qualitative study into the lay conceptions of well-being among middle aged and elderly adults identified several dimensions, not all of which are found in the quantitative literature. Amongst these were quality, achievement, retrospection, fulfilment, affective aspects, a hard life and a normal life, in addition to life satisfaction. Having reviewed a number of studies on lay conceptions of well-being, Westerhof et al (2001) summarised all these conceptions under the following categories: *global judgements of life* (life satisfaction, progress, achievements); *intrapersonal aspects* (e.g. self-esteem, self-acceptance, personality, personal development); *interpersonal aspects* (relationships, social contributions), and other *specific domains* (e.g. health and illness, career, leisure, religion).

An extensive qualitative study on happiness with adolescents was conducted by Magen (1998), attempting to answer the question what makes adolescents happy. Adolescents’ responses were coded into the following categories: experiences with the self (including satisfaction, accomplishments, and actualisation), experiences with the external world (e.g. beauty, pleasure, music) and experiences with others (love, helping or transcending oneself). She also concluded that experiences of hedonic pleasure and satisfaction were mentioned far more frequently than the ones related to self-realisation and meaning in life (eudaimonic well-being), with only one third of respondents depicting the latter experiences.

Eigner (2001) conducted in-depth interviews with a small group of environmental activists, whose life goals she describes as global enhancement. Her qualitative analysis revealed that the well-being of participants was based on fascination with nature, joy found from being in nature, the felt effectiveness of their activities, acting in concordance with one's conscience, internal locus of control, social networks and satisfaction with their lives. The latest result is particularly interesting in that satisfaction with life for her participants was strongly linked with an engagement in a universally meaningful activity, resembling eudaimonic well-being.

Vitterso et al's (2003) study of teleworkers working from home allocated quality of life indicators into three categories based on Renwick and Brown's (1996) conceptual framework of well-being. (1) *Being* encompasses the most basic aspects of who people are as individuals. (2) *Belonging* is concerned with the fit between individuals and their various environments. (3) *Becoming* focuses on the purposeful activities in which individuals engage as they attempt to realise their goals, aspirations and hopes.

Schimmack, Diener, and Oishi (2002) coded their participants' life satisfaction judgements into several categories derived from the literature. Family, romantic life, relationships with friends, academic life and past events were used most often.

Relevance of this section to the research questions

The last part argues that in developing a more adequate definition of well-being, more attention needs to be paid to qualitative approaches, which can offer the necessary intricacy and depth. Qualitative methods can be extremely useful in mapping out the field, developing conceptual clarity and formulating an overarching framework, yet this stage was missed in the development of well-being measures. So what is meant by well-being? Although the few studies reviewed above offer some answers to this question, a conclusion is far from being reached. One of the major drawbacks of many of these studies lies in the employment of a top-down, rather than a more open-ended emergent

approach, to data analysis. The question of the meaning of well-being remains open, together with the question of what well-being we are looking for when investigating the central relationship in this study. The need to find further answers to these questions is reflected in the addition of the item on the meaning of well-being into the revised research questions, which can be found at the end of this chapter.

3.9. Well-being and life goals research

Goal-theorists argue that human subjective well-being cannot be explained purely in terms of either objective external conditions or stable internal traits. To a great extent, it depends on human ability to reflect, to choose a direction in life, to form intentions and to direct oneself towards a certain path (Schmuck and Sheldon, 2001). Life goals (otherwise referred to as core goals, personal strivings, personal projects, life tasks, possible selves and future aspirations) are specific motivational objectives by which a person directs their life. They differ from biological drives and motive dispositions (which are unconscious yearnings for certain types of experiences, such as intimacy) because they are formulated at the conscious level. They also differ from generalised values one may hold. They are further distinct from short-term goals because they direct persons' lives for an extended duration.

There are two research traditions tackling the question of the relationship between life goals and well-being. The first approach focuses on the *process* of pursuing goals and individuals' competence in this process (i.e. a believe in attaining goals, level of commitment, making progress and achieving goals) without asking *what* goals are being pursued. The other tradition focuses on the content and quality of life goals. It does not limit itself to assessing *how well* one pursues their goals but looks at *what* goals one pursues and *why* one is pursuing them (Schmuck & Sheldon, 2001).

3.9.1. The process of goal pursuit

Setting goals per se is not sufficient, as action is required to achieve them. Heckhausen (1991) and Gollwitzer (1990) offer a sequential model of such action processes, consisting of pre-decision, pre-actional, actional, and post-actional stages. McGrath & Tschan (2004) identify several time-related problems in the action cycle, including competing goals in the same time period and acting within a certain amount of time.

Several studies of life goals pursuit conclude that well-being is enhanced if people have positive expectancies about goal attainment (Ford & Nichols, 1991) and are making progress towards their chosen goals (Carver, Lawrence, & Scheier, 1996). For example, Brunstein (1993) claims that three goal dimensions, namely, commitment to goals, attainability of goals, and progress in goal achievement, play an important role in facilitating a change in well-being. In a review of empirical findings, Little (1998) writes: "...Well-being will be enhanced to the extent that individuals are engaged in personal projects that are ... well-structured, supported by others, not unduly stressful, and which engender a sense of efficacy" (p.20).

A famous study by McGregor and Little (1998) bridges the process and content research traditions. In examining relationships between goals and two types of well-being – happiness and meaning, they looked at two distinct variables of goal pursuit, namely, *efficacy* (how likely one's projects are to be successful) and *integrity* (how consistent one's projects are with the core meaning of one's self). McGregor and Little saw a potential tension between these two factors, as one of these serves a function of manageability while the other is concerned with the significance of goals to a person. The researchers demonstrated that personal project efficacy is associated with happiness (or hedonic well-being), while integrity is associated with meaning (or eudaimonic well-being). They write: "...just as action and reflection are gracefully balanced in Shiva's dance, the dual goal function of efficacy and integrity are both desirable and need not to be mutually exclusive or in conflict" (pp.508-9).

3.9.2. Content-related goal research

Within the tradition dealing with the content of goals, it is possible to distinguish between three somewhat different approaches. The first suggests that holding certain values and goals is likely to lead to well-being. The second claims that well-being results from the attainment of goals that are based on appropriate motivation. The third position emphasises congruence between one's goals and underlying values.

3.9.2.1. Content of goals

Several researchers attempt to classify goals into categories according to their content. Fromm (1976), for example, made a distinction between a "having orientation" (obtaining wealth and status) and a "being orientation" (self-actualisation). Boehnke et al (2001) argue that the pursuit of self-enhancement or materialist values leads to poorer well-being. Salmela-Aro et al (2001) looked at the impact of self-focused goals on well-being. Having defined self-focused goals as strivings that deal with self, lifestyle and personality, focusing on altering and improving the self, they present evidence that people who are primarily self-focused have fewer goals that are related to the outer world and report lower well-being and self-esteem.

A different approach to goal classification was used by Kasser and Ryan (1996) who compared extrinsic and intrinsic goals. People who focused on extrinsic aspirations (financial success, social recognition and appearance) experienced less well-being as compared to those focused primarily on intrinsic aspirations (self-acceptance, affiliation and community feeling). Only the attainment of intrinsic goals was found to benefit well-being (Kasser, 2000). Furthermore, extrinsic goals were found to be associated with lower self-esteem, more drug use, more television consumption, more difficult and less satisfying relationships, and acting in a narcissistic and competitive manner. The findings of Schmuck (2001) are consistent with Kasser and Ryan's in that intrinsic goals appear to be more important for well-being than extrinsic goal pursuit.

3.9.2.2. Motivation behind goal pursuit

The *self-concordance model* of goal striving developed by Sheldon (1994) claims that well-being is higher when people select goals that are self-concordant. Underlying this model is discrimination between two fundamental types of motivation: extrinsic and intrinsic. Intrinsic motivation reflects the inherent human tendency to seek out novelty and challenges, to explore, to exercise one's capacities. An activity is performed for the sake of itself, out of enjoyment or interest. Extrinsic motivation refers to the performance of an activity in order to attain some other outcome. While intrinsic motivation is characterised by intrinsic regulatory processes, extrinsic motivation can have up to four different subtypes of regulation: external, introjected, identified and integrated. *External* regulation refers to being driven by outside forces, performing an activity either in order to obtain a reward or avoid punishment. *Introjected* regulation is based on self-control, acting in order to avoid guilt and anxiety. *Identified* regulation is more autonomous, the behaviour becomes consciously valued and personally important. Finally, *integrated* regulation is based on full subscription to the values underlying the behaviour, which is consciously assimilated into the self. Although the integrated and intrinsic regulations are very similar in internal locus of causality, they still belong to the extrinsic motivation domain because behaviour is performed for some other end, rather than having an end in itself (Brown & Ryan, 2004; Ryan, & Deci, 2000).

These four types of regulation vary to the extent they are self-integrated or authentic, with the latter two types being progressively more integrated, authentic and autonomous. Self-concordant goals are those based on identified, integrated and intrinsic motivation. Not only self-concordant goals are associated with higher well-being, Sheldon & Elliot's (1999) longitudinal studies also demonstrate that people are more likely to sustain efforts in achieving them. Moreover, attainment of these goals leads to enhancing well-being even further.

The self-concordance model is largely based on the assumptions of self-determination theory (SDT), introduced in section 3.6. In accordance with SDT, research by Sheldon et al (1996) has shown that feeling more competent and autonomous in daily activities leads to enhanced well-being. Participants high in those traits tended to have better days. Feeling more competent and autonomous in relation to their own baseline also correlated with better days. This study, however, relied on a retrospective diary method, which, as has been discussed in Chapter 2, can be a serious drawback.

3.9.2.3. Values/goals – life congruence research

Several studies, somewhat oppose those described above by showing that it is not so much the content of goals themselves, or even alignment between goals and integrated/intrinsic motivation that is important, but the congruence between the values (deeply held beliefs) a person has and their goals.

Oishi *et al* (1999) proposed the value-as-a-moderator mode, which predicts that people gain a sense of satisfaction out of activities and domains congruent with their values. The values in this study were identified according to Schwartz & Sagiv's (1995) ten universal values (Power, Achievement, Hedonism, Stimulation, Self-Direction, Universalism, Benevolence, Tradition, Conformity and Security). Daily satisfaction with Achievement was a significantly stronger predictor of daily satisfaction for those high rather than low in Achievement values. Likewise, daily satisfaction with social life was a much stronger predictor of overall daily satisfaction for those high in Benevolence values. Contrary to the self-determination theorists, Oishi et al did not find that extrinsic values (such as Power) or intrinsic values (e.g. Benevolence, Self-direction) were associated with lower and higher well-being respectively, only that value-congruent activities provide a sense of satisfaction.

Their findings are consistent with Emmons' (1991) who found that people exhibited more intense positive and negative affect in response to daily events, if these

events were coherent with their personal strivings. Cantor *et al.* (1991) looked at the relationship between daily events as measured by the experience sampling method and the participants' life tasks. When participants were in situations related to their life tasks they reported more intense and more positive emotions. Similar findings were reported by Brunstein *et al.* (1998) who found that commitment and perceived progress towards motive-congruent goals (for example agentic goals for agency motivated students), in contrast to perceived progress towards motive-incongruent goals relates to well-being. Thus it is not the progress per se that is important but the progress towards congruent goals. An additional finding from these studies is that a high level of commitment towards motive-incongruent goals results in lower well-being.

Diener and Fujita (1995) applied goal theory to the counterintuitive finding that resources (money, health, athletic ability and attractiveness) scarcely correlate with SWB. They concluded that if resources were congruent with individual goals and strivings (e.g. materialistic strivings), then they had a much higher effect on well-being.

Sagiv and Schwartz (2000) discuss three mechanisms that enable the values/goals - life congruence. The first relies on functional utility of the environment. Environments that are congruent with people's goals and values provide people with the opportunities to attain their goals (Gibson, 1979). Social support is another important mechanism for achieving congruence through buffering against stressors (Davis, Morris, & Kraus, 1998; Komproe *et al.*, 1997). Finally, Sagiv and Schwartz (2000) stress that internal conflict can have a detrimental effect on well-being. For instance, holding incompatible sets of values could be such a conflict (Schwartz, 1992; Tetlock, 1986). Several studies provide support for this claim.

One of these studies, by Emmons (1986) showed that poor well-being was related to both internal conflict between goals (when an attainment of the goal deemed important blocks the attainment of other important goals) and ambivalence (when the person feels both happy and unhappy on the attainment of the goal). Rumination on

conflicting or ambivalent strivings was also associated with lower well-being. Sheldon and Kasser (1995) explored whether *congruence* and *coherence* were essential for personality integration. By *vertical coherence* they understood consistency between lower and higher levels of goals. *Horizontal coherence* involved consistency between goals at the same level. *Congruence* referred to pursuing goals for self-determined reasons and through intrinsic motivation. Both congruence and vertical coherence emerged as predictors of various well-being outcomes. Their conclusions support both the congruence research discussed above, and the importance of the minimisation of internal conflicts point introduced in the previous paragraph.

Summarising existing research on goals, Lyubomirsky (2001) writes that well-being is enhanced when people choose to pursue goals:

- That are feasible, realistic and attainable (McGregor & Little, 1998; Diener & Fujita, 1995; Ford and Nichols, 1991);
- Which they are making progress towards (Carver, Lawrence, & Scheier, 1996; Brunstein, 1993);
- That they feel highly committed to (Brunstein, 1993);
- That are intrinsic (Kasser & Ryan, 1996);
- That are self-concordant and congruent with their motives and needs (Brunstein, Schultheiss, & Grassman, 1998; Sheldon & Elliot, 1999; Sheldon & Kasser, 1995; Deci & Ryan, 1985);
- That are valued by one's culture (Suh, 2000; Diener & Diener, 1995);
- That are not conflicting (Sheldon & Kasser, 1995).

If the pursuit of goals is so fundamental for well-being, why do people so often fail to pursue goals that are important to them? Ford and Nichols (1991) identify three reasons for that. First of all, people often choose to pursue goals that are less important but more attentionally salient (daily chores, events, etc). Secondly, negative personal agency

beliefs can lead one to the evaluation that goals are unattainable. Finally, a lack of energy resources can lead to a premature termination of efforts.

It is a belief of the author, that research on life goals should be a fundamental part of the well-being discipline because it generates many theories which can offer explanations (rather than mere descriptions) for mechanisms underlying well-being. Moreover, life goals may be important for understanding time use, despite the very limited research that currently links these two areas of study.

Relevance of life goals studies to the research questions

A number of the studies reviewed above argued that the content of goals is important for well-being. This content view is contrasted with the goal process theories. Several pieces of research, including Oishi's et al (1999) value-as-moderator model (also Emmons, 1996; Canton et al, 1991; McGregor and Little, 1998; etc), point out the necessity of congruence between one's fundamental goals/values and their life activities. However, not only motivational theorists argue for the importance of such congruence, a similar theme has been identified by Elliot (1997, see chapter 2, p.), who speaks about congruence between people's actions and who they feel they really are (in terms of self-perception and self-evaluation) as one of the important factors in achieving a feeling of balance with time. She further pointed out that, when in-balance, people do not feel time anxiety.

Putting findings from life goals research together with some conclusions reached by time use qualitative researchers, it is possible to theorise that a sense of congruence between one's values, goals and actions results not only in the experience of well-being, but may also have an impact on one's time use (e.g. people are likely to feel more satisfied with their time and to experience time as a less salient feature). This possibility will be explored further through expanding the research questions appropriately.

CHAPTER 3 SUMMARY:

- The notion of *subjective well-being* (SWB) is a recognised research literature substitute for the more commonly used term of happiness. SWB is considered to be a multidimensional construct, and is usually measured through life satisfaction and positive and negative affect. Although measures of SWB are sensitive to comparison and contrast, they nevertheless appear quite stable over time. SWB theorists advocate a distinction between so-called momentary and global well-being, which can be paralleled with a state-trait distinction.
- The notion of affect comprises both mood and the emotions that are associated with the experience of momentary events. Recent research has suggested that the functions of positive emotions include increasing the breadth of one's thought-action repertoire and building durable psychological resources.
- Life Satisfaction (LS) is a cognitive component of SWB, which reflects one's conscious evaluation of one's life. There are many debates in the field of whether it is possible to permanently change someone's level of LS.
- In considering predictors and correlates of SWB, more attention is paid to personality factors, social relationships, work and employment, before briefly discussing the patterns of relationships with other variables. Although time use appears in some studies on correlates of well-being, it has not been examined thoroughly by the well-being theorists, leaving this question in need of further investigation.
- Next, the chapter examines theories of interplay between hereditary, circumstantial and voluntary factors in well-being. It is suggested that time use can be seen as belonging to the circumstantial and voluntary categories.
- The subsequent part deals with whether SWB is an adequate representation of what it means to be psychologically well. The notion of subjective well-being as generally defined does not tackle questions of personal growth/development or of meaningfulness that appear paramount to a life well-lived. Given this, a question is

raised as to whether in considering the relationship between time use and well-being, SWB can be seen as an appropriate correlate. A distinction is drawn between the notions of hedonic and eudaimonic well-being, and the possibility of a relationship between satisfaction with time use and eudaimonic well-being is proposed. However, due to the lack of consensus of what eudaimonic well-being actually is, and the lack of adequate measuring instruments, it is difficult to use it as an outcome variable in quantitative research at present.

- Quantitative approaches to measuring well-being have been criticised for the lack of conceptual clarity of what is meant by the terms they use, and for not utilising exploratory research to assist in the measures development process. However, most often these criticisms resulted in a refinement of measures rather than a reconsideration of approach. This part of the chapter considers qualitative studies of well-being, which are scarce in the field. The meaning of well-being remains to be explored further and this topic is incorporated into the revised research questions.
- The final part of the chapter is devoted to the review of the literature concerned with the emerging area of life goals/values and well-being. Many of the findings from this area appear relevant to the problem of time use and well-being. Existing research on life goals suggests that well-being is enhanced when people choose to pursue goals that are feasible, realistic, well-structured and attainable; those which they are making progress towards or feel highly committed to; not based on self-enhancement or materialistic values; intrinsic; not conflicting; self-concordant and congruent with people's needs and values. Putting findings from life goals research together with some conclusions reached in time use qualitative studies, it is possible to theorise that a sense of congruence between one's values, goals and their actions result not only in the experience of well-being, but may also have an impact on one's time use.

REVISED RESEARCH QUESTIONS

On the basis of the literature review, the research questions posed originally were reworded and expanded. The main purpose of these questions is to investigate the construct of satisfaction with time use and the relationship between time use and well-being. This entails prior questions such as participants' perception of time use and well-being. Since congruence between life goals and activities can also affect satisfaction with time use, this is also addressed as a separate research question.

1. Time use satisfaction

1.1. What is the participants' experience of their time use?

1.2. What factors contribute to satisfaction with time use?

1.3. How do participants relate to the experience of time pressure or time anxiety?

1.4. How important are time management skills for satisfaction with time use?

1.5. What is the relationship between satisfaction with time use and locus of control?

2. Well-being and the relationship between satisfaction with time use and well-being

2.1. What meaning do participants assign to the notion of well-being/happiness?

2.2. Is there a relationship between satisfaction with time use and well-being?

2.3. What is the relationship between satisfaction with time use and well-being?

3. Life goals/values – life congruence

3.1. Does the sense of congruence between life goals/values and the way people lead life relate to their satisfaction with time use?

The methodology used to address these research questions will be considered next.

CHAPTER 4: METHODOLOGY

The current state of knowledge about time use satisfaction, well-being and life goals as presented in the preceding three chapters, provides an incomplete representation of the subjective experience of time use, and is particularly inconclusive about what makes people satisfied with their time use. Furthermore, there is an insufficient understanding of the nature of the relationship between time use and well-being, time use and life goals, and time use and feeling in control. Yet, answering these questions could help provide some tools to address the widespread experience of time crunch and anxiety. This chapter will discuss the rationale for the methodology employed for embarking upon the above questions.

The thesis benefits from two consecutive studies, which utilised complimentary research designs and methodologies. The first, a qualitative study explored the research questions through semi-structured in-depth interviews with 21 participants, 11 of whom were largely satisfied with their time use, and 10 of whom were largely dissatisfied with their time use. The theoretical approach and method of analysis used in the study was *Interpretative Phenomenological Analysis*, which has been developed in the last ten years to explore accounts of personal experience.

The rationale underlying the second study was to systematically examine the conclusions from the qualitative investigation in a quantitative way. This survey study employed a postal questionnaire designed to test the factors contributing to satisfaction with time use that were derived from the first study, and to examine possible associations indicated in the research questions. Statistical methods of analysis utilised in the second study included factor, correlational and multiple regression analyses.

The chapter that follows will first examine the methodological issues related to the qualitative study, and will then consider the methodology of the second study.

4.1. Study 1 objectives

In line with the research questions the objectives of the first study were: to explore participants' subjective experience of time use; to identify the factors contributing to satisfaction with time use; to elicit the meaning of well-being to the participants; and to explore the associations between time use, well-being, life goals and feeling in control.

It was hoped that the study results would clarify some of the complex personal and environmental factors and interpersonal processes that affect satisfaction with time use and would illuminate the relationships between the variables in question.

4.2. Study 1 research design and method

In any research a number of factors have to be taken into consideration, including the preferred methodological paradigm, the degree of desired control over the process, the mode of analysis, available resources and the time frame. Patton (1990) comments that “there are no perfect research designs” (p. 162), because regardless of the researcher's choice, certain trade-offs are always present. These can be the trade-offs of either breadth or depth, of studying one or a few people vs. studying a larger group, conducting a study longitudinally or cross-sectionally. Patton concludes: “In brief, these are not choices between good and bad, but choices among alternatives, all of which have merit” (p. 166).

The researcher made several design decisions affecting the methodology and sample. The first decision between depth and breadth reflects the choice between qualitative and quantitative approaches. A qualitative (or depth) approach was chosen for this study, and the quantitative (or breadth) approach – for the next one. A qualitative approach is seen to benefit research into complexities and processes, little-known phenomena or where the relevant variables have yet to be identified. Moreover, qualitative methodology allows focusing on individual experiences and meanings in

depth. Time is a complex process and it is likely that some factors contributing to satisfaction with time use have not yet been identified. The last chapter argued that the construct of well-being is also in an acute need of further qualitative research. As this is a study of experience, it is a good idea to start from an individual's standpoint before moving on to generalisations. It, therefore, seems reasonable to argue that the preferred approach to the first study should be a qualitative one. Theory testing, which is a strength of quantitative research, will come in the second study, whilst study one is primarily concerned with identification, description and theory-generation (Crabtree & Miller, 1992).

A one-shot design and in-depth phenomenological interviews were chosen as the specific method of data collection. They aim to allow the researcher to access the phenomena from the perspective of the person being interviewed, rather than apply an interviewer's preconceived ideas onto the respondents' responses. An underlying assumption in a phenomenological interview is that the perspective of a respondent is meaningful, knowable to him or her and can be made explicit (Pollio et al, 1997). In a phenomenological interview, a dialogue is expected to flow with a minimum of pre-specified questions (Pollio et al, 1997), thus a semi-structured interview format was chosen. It is possible, using a semi-structured interview, to gather a lot of rich, textural data and also to clarify areas that are less clear immediately.

The third decision was what sample characteristics would identify the participants. Originally, the researcher thought of interviewing only those who are satisfied with their time and feel they are using it well, in order to learn from the positive exemplar cases. It was decided however, that using a confirming and disconfirming sampling strategy would safeguard against a potentially skewed representation of satisfaction with time use. Thus the final sample consisted of participants who self-reported as being satisfied with their time use and those who were generally dissatisfied with it (please see section 4.3 for a further sampling discussion).

Following the above considerations, the first study employed a qualitative phenomenological approach to semi-structured in-depth interviews with participants, half of whom were generally satisfied and half of whom were not satisfied with their time use. A thematic analysis based on the guidelines of the Interpretative Phenomenological Analysis was chosen to describe participants' experience of time use and factors contributing to their satisfaction with time use. This analysis was intended to enable the development of a conceptual representation of satisfaction with time use that would be put to test in the subsequent quantitative study.

4.2.1. Theoretical approach used in this study

Selecting a qualitative approach is not sufficient per se, as a choice still needs to be made between different theoretical traditions within qualitative methodology. Grounded theory, symbolic interactionism, discourse analysis, hermeneutics and phenomenology are some of the common approaches employed by the social scientists (Crabtree & Miller, 1992). Patton (1990) writes: "...how you study the world determines what you learn about the world" (p.67).

The theoretical approach to the data collection and analysis chosen for this study was Interpretative Phenomenological Analysis or IPA (Smith, 1996). Smith and Osborn (2003, p. 51) state that its aim "...is to explore in detail how participants are making sense of their personal and social world, and the main currency for an IPA study is the meanings particular experiences, events, states hold for participants". Experience of and satisfaction with time use appear particularly suitable for IPA analysis, as it is the meaning of the time use that seems to matter more than any objective characteristics of it.

IPA is essentially a phenomenological approach (Giorgi & Giorgi, 2003), because it is concerned with individual perceptions and accounts of the phenomena, rather than with producing an objective statement of the phenomena itself (this

antecedent will be explored further in the next section). This is fully appropriate for the present study because the researcher is interested in studying subjective time use, moving away from the objective accounts. However, IPA also recognises the active role of the researcher in the study process. Not only are the participants trying to make sense of their internal worlds, but the researcher is also trying to make sense of their making sense. Meaning making can be complicated and complemented by the researcher's own conceptions, which are nevertheless necessary to make sense of the other person's worldview (Smith et al, 1999). Meanings here can be seen as interactional (which represents a symbolic interactionist perspective), and the position of the interpreter as central. Thus IPA is grounded not only in phenomenology, but also in hermeneutics and theories of interpretation. Smith (2004, p.40) comments: "For IPA, one can say human research involves a double hermeneutic" (both parties making sense). This allows the researcher to question participants' explanations and to reflect on his/her own feeling that something may be missing, for example (Smith & Osborn, 2003).

In its emphasis on the sense-making of both the participants and the researcher, IPA's central concern can be seen as cognition. However, it views people as cognitive, linguistic, affective and physical beings, and assumes a chain of connections between these elements.

Smith (2004) identifies three characteristic features of IPA: idiographic, inductive and interrogative. The *idiographic* approach means IPA starts with a detailed examination of each individual case, until some feeling of closure is achieved. Once it is achieved, the tables of themes for each participant can be collated together, looking both for what is shared and what is unique for each individual. The *inductive* approach means unanticipated themes can emerge during the data analysis, rather than attempting to verify a specific hypothesis. Finally, the results of IPA research do not need to be considered in isolation, but can be discussed in relation to existing literature, which constitutes an *interrogative* approach.

This method is deemed especially useful, when the research questions are concerned with complexity, process or novelty (Smith and Osborn, 2003). Research into subjective experience of time use fits these criteria well.

IPA originated within health psychology, having been applied to topics such as the understanding of pain, nurses' models of mental health or GPs' decision making processes. However, increasingly it is being used to study questions outside of health psychology, for example, the relationship between delusions and personal goals (Rhodes and Jakes, 2000), change in a woman's sense of identity during the transition to motherhood (Smith, 1999) and children's understanding of well-being (Pennington, 2002). Smith (2004) firmly maintains that IPA should not be seen as a method limited only to health psychology.

4.2.1.1. Roots of IPA: phenomenological and hermeneutic traditions

This section will examine the roots of IPA – the phenomenological and hermeneutic traditions – and consider the possibility of a method of analysis that takes account of lived experience and interpretations of that experience and, in a sense, aims to honour both traditions.

The phenomenological tradition seeks to understand the lived experience (which is defined as the individual experience of people as conscious human beings) of participants and their intentions. It tries to answer questions such as: “What is the structure and essence of experience of this phenomenon for these people” (Patton, 1990, p.88), or “What is it really like to have a certain experience”? Patton cautions that the meaning of phenomenology varies and can appear somewhat confused, in that it is seen as a philosophy, as synonymous with qualitative methodology and increasingly as a specific approach to qualitative inquiry. Even though phenomenology originated as a philosophy, it is the third meaning that is of particular relevance to this thesis.

Phenomenology broadly refers to the science of phenomena. Van Manen (2002) traces the roots of phenomenology to Kant, who used the term “to distinguish the study of objects and events (phenomena) as they appear in our experience from objects and events as they are in themselves (noumena)” (p.183). It is Edmund Husserl (1859-1938), however, who is usually credited with the introduction of phenomenology at the beginning of 1900. He intended to establish it as the fundamental philosophy for all scientific investigations. Husserl confronted the ultimate dualistic split between subject and object, underlying the philosophy of natural sciences, arguing that this split was a source of serious errors. He suggested that “we can only know what we experience” (Patton, 1990, p. 69), uniting the objective and subjective in this assumption.

Phenomenology as a method of qualitative inquiry has become well established in psychology. Giorgi and Giorgi (2003, p.27) write: “...phenomenology seeks the psychological meanings that constitute the phenomenon through investigating and analysing lived examples of the phenomenon within the context of the participants’ lives”. An important assumption embedded in a phenomenological approach is that there is an essence to shared experience. Thus the focus of a phenomenological study is to get to the essence of the experience of some phenomenon (e.g. the essence of being a mother). The process of phenomenological inquiry, involving *epoche* (examining one’s own preconceived notions and experiences related to the phenomenon), bracketing and phenomenological reduction, is not described in further detail here, because the IPA method offers its own process of data analysis.

Interpretation theory and hermeneutics were developed by Heidegger, Wilhelm Dilthey and other mainly German philosophers and are concerned with the study of interpretative understanding, paying attention to context and original purpose (Patton, 1990). In order to interpret something we need to understand what an author wanted to communicate, what deeper meaning was intended, and in what context and from what perspective the speech act took place. Kneller (1984) summarises the essence of

interpretation as requiring a researcher to open him/herself to the text, question it and interpret it in the light of one's own situation. In hermeneutics, a researcher's own perspective must be made explicit, as well as anything else that can affect the interpretation.

Thus phenomenology seeks to understand the essence of lived experience, whilst hermeneutic analysis attempts to give that understanding voice, because the interpretation of text is an essential element in eliciting this experience. These two approaches have influenced IPA.

Smith (2004) himself does not claim that IPA has a very distinct epistemological or methodological position within phenomenology. Rather, he sees it as "...part of a stable of closely connected approaches which share a commitment to the exploration of personal lived experience, but which have different emphases or suggested techniques to engage in this project" (p.41). Amongst these approaches he lists those of Ashworth (2003), Benner (1994), Giorgi & Giorgi (2003), Moustakas (1994) and Van Manen (2002). There are, however, differences between IPA and the abovementioned approaches, because phenomenological study is more concerned with description and understanding of what is, and does not encourage questioning or explanation. IPA, however, because of its hermeneutic roots, explicitly encourages questioning and contextual interpretation. IPA seems to offer one way of bridging the divide between the worlds of description of experience and interpretation of experience (Ashworth, 2003).

4.2.1.2. Brief comparison with other methodologies

This section intends to briefly compare IPA with two other commonly used qualitative methodologies: grounded theory and discourse analysis.

Somewhat similar to IPA, *grounded theory* also has its philosophical roots in phenomenology. Glaser and Strauss (1967) chose this label to describe a method that allowed theoretical statements to be clearly "grounded" in experiential data.

Phenomenology, from their point of view, in restricting itself to description rather than model-building, simply did not go far enough (Evans-Jones, 2002). Grounded theory studies usually require a systematic step-by-step analysis of textual data. Having segmented the material into *meaning units*, the researcher then tries to code them in an open manner, assigning to them all possible meanings. Similar concepts and meanings are merged into larger categories at the next step of analysis, and are being continuously checked and updated. Finally, the researcher constructs a model or theoretical framework on the basis of the main categories that emerged (Evans-Jones, 2001).

An approach such as grounded theory could have been used for the current study, but was not selected as it does not explicitly acknowledge the role of the researcher and his/her impact on the research process (although many researchers would tend to admit their own biases). Furthermore, Evans-Jones (2001) goes so far as to suggest that grounded theory seems to imply that psychological relationships exist objectively in the world, are reflected in qualitative data, and can be “captured” by a researcher (saying that, many grounded theorists are very aware of the imperfections of their data). Although IPA is broadly realist (i.e. it assumes that a real world exists), it takes a more relativist stance than grounded theory (i.e. it deals more with 'how people make sense of what happens' - rather than with 'what happens').

The commitment to the importance of language and of qualitative analysis is shared between IPA and *discourse analysis* theorists (Smith et al, 1999). However, the latter studies verbal reports in their own right, not acknowledging the necessity of going beyond the verbal statements to understand the connections between verbal reports, behaviours and underlying cognitions. Differently from DA, IPA is concerned with cognitions (Kirkland, 2000). In trying to understand what it means to be satisfied with time use and the nature of a relationship between time use and well-being, it is essential to attempt to understand what participants feel and think, in which case it might be necessary to go below the surface of words.

4.3. Study 1 participants

4.3.1. Sampling

The sampling strategy for this study was purposeful, which is consistent with the IPA approach (Smith & Osborn, 2003). It was aimed at “selecting information-rich cases whose study will illuminate the questions under study” (Patton, 1990, p. 169). Patton distinguishes between sixteen purposeful sampling strategies: extreme or deviant case, intensity, maximum variation, homogeneous, typical case, stratified, critical case, snowball or chain, criterion, theory-based or operational construct, confirming and disconfirming cases, opportunistic, random purposeful, sampling politically important cases, convenience and combination or mixed purposeful sampling. Each of these strategies serves a somewhat different purpose. However, because research often has multiple purposes, more than one sampling strategy can be used, as they are not exclusive of each other. Thus, the current study used *combination or mixed purposeful sampling*, which combined the following four features:

- *Intensity sampling* – using this strategy, a researcher seeks to study a rich bearer of the phenomena, but not an unusual example.
- *Confirming and disconfirming cases* – this strategy is good for elaborating and deepening the analysis through seeking exceptions and testing variations. For example, it may be that people who are satisfied with their time use know best about how to get there, however, interviewing only these people may result in missing some key information. Bearing this in mind, it was decided to interview both people who are satisfied and those who are dissatisfied with their time use.
- *Snowball or chain sampling* – a strategy for locating information rich cases. Most participants were identified through asking well-situated people who know other people who may be good interview subjects.

- *Opportunistic sampling* – this strategy involves flexibility in following new leads when the fieldwork has already begun, even though the participants list may be completed. It was used on two occasions, and allowed the researcher to take advantage of new opportunities during the actual data collection.

Qualitative approaches do not require a representative approach to sampling, but it was deemed preferable that participants would be of different social and educational backgrounds to avoid homogeneity in the sample. Thus the researcher attempted to select participants from a variety of backgrounds and occupations, although psychologists and professionals formed a substantial part of the sample as information rich cases.

With respect to sample size, Creswell (1998) notes that most phenomenological studies involve samples ranging from 5 to 25 participants. Smith (1999) notes that most IPA studies are conducted with 5 to 15 participants, but that single case studies and larger studies are also possible. The targeted participant sample for this study was twenty respondents, which is a realistic sample given the time constraints.

4.3.2. Inclusion and exclusion criteria

1. Participants were included in the study if they felt either satisfied or dissatisfied with their time use. The researcher avoided participants who felt that time was not important for them.
2. Participants were of any gender, occupation, educational level, and of any age above 18. However, the age range between 35 to 45 years was of particular interest to the researcher, because studies show that this group is characterised by the highest level of stress, which is closely linked to issues of problematic time use (Elliot, 1997).

3. Following the intensity sampling strategy the researcher was particularly interested in participants who had to combine a number of competing demands on their time, or people who devoted a substantial amount of time to activities other than rest.
4. The exclusion criteria included recent trauma or significant life events (bereavement, marriage, etc). The reason for this was not to place an additional burden on these people.

4.3.3. Participants profiles/characteristics

Initially, 22 participants who expressed an interest in taking part in the study were contacted. However, during the interview with one of the participants, the tape recorder malfunctioned and it was not possible to transcribe the interview. Subsequently, the data from this participant was excluded from the description and analysis.

The demographic characteristics of the sample were gathered through the closing questions of the interview (see 4.4.2), unless they had already been disclosed in the course of the interview. They are presented in Table 1. The questions covered age, ethnic background, partnership status, number and ages of children, occupation and level of education.

The sample included 9 women (43%) and 12 men (57%). Two participants were Caucasian and had a European background, one Caucasian had an American background, and one participant chose to describe himself as Asian. The rest (17 or 81%) of participants were Caucasians with a British background. It was hoped that the sample would be more racially heterogeneous, but this proved harder than expected in the time available. Two of the participants in the study (9.5%) were disabled.

The participants ranged in age from 26 to 60 years. The average age was 42.3 years. Over half of the sample (11 or 52%) were married and a further 6 (29%) were cohabiting. This means that overall 81% of the sample were in long-term relationships.

Two participants identified themselves as single, and a further two as divorced (although one of them was in a new relationship).

Over half of the sample (13 or 62%) had children, in fact 10 participants had children under 16 living with them (48%). The number of children ranged from one to three. The remaining 38% did not have children.

Most of the participants worked in academia, business or the public sector, areas the author works in, though nearly a third were teachers in higher education (6 or 29% of participants). Four of these academics were psychology academics, including two lecturers, a reader and a professor, and two were a lecturer and a professor in nursing. Seven individuals (33%) worked in the business sector (the head of a public relations company, a marketing executive, an interior designer, a travel agent, head of small business, a casino croupier and a public relations executive). Five participants worked in the public sector, including an administrator (NHS), a fire-fighter (Fire Brigade), a psychotherapist (NHS), a senior police officer (Police) and an occupational psychologist (Home Office). This means that 90% of participants were in paid work. Only one (5%) participant was retired and the remaining two (10%) were students studying for a PhD.

The education of 5 (24%) participants did not exceed school (A levels) or Certificate level. A further 3 (14%) were educated to a Diploma level. Six participants (29%) were educated to a Bachelor's degree level (one of them was studying towards a PhD), and another two (10%; one of whom was also studying towards a PhD) – to a Masters degree level. Finally, five (24%) individuals had a PhD. The current sample is more educated than the general adult population. However, these individuals were identified as information-rich cases, and because this was an exploratory study, this demographic distribution was considered acceptable.

| | Name | Gender | Ethnicity | Age | Partnership status | No of children (age) | Occupation | Education |
|---------|------|--------|----------------|--------|---------------------|----------------------|---------------------------|---------------|
| 1 | AG | F | White British | 45 | Married | One (8) | Lecturer in nursing | PhD |
| 2 | AL | M | White British | 30 | Married | Three (9,4,1) | Lecturer in psychology | BSc |
| 3 | AM | M | White British | 41 | Living with partner | No | Head of PR company | BSc |
| 4 | BF | F | White American | 39 | Married | Two (4,1) | Professor in psychology | PhD |
| 5 | DC | F | White British | 42 | Married | Three (13,10,4) | Marketing executive | Certificate |
| 6 | DF | M | White British | 35 | Single | No | Student | MA, PhD (IP) |
| 7 | FT | M | White British | 60 | Married | One (23) | Reader in psychology | PhD |
| 9 | GM | M | White European | 42 | Married | Three (10,8,1) | Salesman | A levels |
| 10 | GP | F | White British | 38 | Living with partner | One (12) | Administrator | Certificate |
| 11 | JA | M | White British | 26 | Living with partner | No | Fire-fighter | BA |
| 12 | JB | M | White British | 59 | Divorced | No | Travel agent | A levels |
| 13 | JH | M | White British | 47 | Single | No | Head of small business | Diploma |
| 14 | JT1 | F | White British | 38 | Married | Three (6,5,5) | Lecturer in psychology | PhD |
| 15 | JT2 | F | White British | 40 | Married | Three (15,11,11) | Student | BSc, PhD (IP) |
| 16 | LB | F | White British | 44 | Living with partner | Three (24,21,13) | Psychotherapist | Diploma |
| 17 | PB | M | Asian | 43 | Divorced | No | Casino croupier | Certificate |
| 18 | PD | M | White British | 35 | Living with partner | No | PR executive | BA |
| 19 | QJ | M | White British | 59 | Living with partner | Three (25,22,21) | Retired | BA |
| 20 | RP | F | White European | 53 | Married | Two (29,24) | Professor in nursing | PhD |
| 21 | RW | M | White British | 40 | Married | Three (8,6,5) | Senior police officer | Diploma |
| 22 | SR | F | White British | 32 | Married | No | Occupational psychologist | MA |
| Average | | | | 42.286 | | | | |

Table 1: Study 1 Demographics

4.4. S1 data collection/procedure

4.4.1. Setting and procedure

The procedure for data collection included the following elements. First of all, a call for participants was prepared in accordance with the inclusion-exclusion criteria discussed in section 4.3.2. This call, which can be found in Appendix 1, was twofold: the first version invited the participation of those who were generally happy and satisfied with the way they use their time, whilst the second version targeted participants who felt unhappy and dissatisfied with their time use. Both of these calls are included in Appendix 1. These calls for participation were emailed to those considered potentially suitable participants in accordance with intensity sampling procedure principles, and to well-situated people who acted as start up points for snowball sampling (e.g. colleagues, PhD student networks and friends).

Following referral by themselves or another, potential participants were sent the Invitation and Information letter and the Consent form (Appendix 4) and asked about their preferences as to location and dates for an interview. Unless the participants brought the Consent form with them, a signature was collected at the interview.

The interviews took place at various locations, depending on availability and the preferences of the participants. Most of the interviews took place at public locations, such as a quiet coffee shop, a hotel reception, the British Library or the participant's office/workplace. Three interviews were carried out in the Open University, which is a work location of the researcher. Five interviews took place at participants' own homes, but following the advice of the Open University Ethics Committee, this was done only if the participant was well known either to the researcher or a trusted informant.

It was intended that the interviews would last about an hour, but the durations varied considerably, from 40 minutes to 1 hour 40 minutes. The average duration however, was between 50 and 60 minutes.

4.4.2. The interview guide

This interview guide was prepared in advance to ensure that somewhat similar information was obtained from different people via approximately similar questions. In semi-structured interviews the researcher is free to word questions spontaneously, explore, probe and ask further questions within the issues relevant to the particular subject predetermined in the interview guide.

The semi-structured in-depth interview aimed to encourage participants to speak about the topic with as little prompting as possible. Broad open-ended questions were used and supplemented with appropriate (minimal) prompts worded more explicitly. Jargon and any assumptions of proficiency in the interviewer's own field were avoided.

Patton (1990) identifies six categories of questions that can be included in the interview guide: experience/behaviour opinion/values, feeling, knowledge, sensory and background questions. Five of these categories (excluding knowledge questions) were utilised in constructing the guide for this study.

Constructing an interview guide can be represented as a four-stage process. At first, it is necessary to think about a broad range of issues to tackle. At the next stage, the topics are arranged in the most appropriate sequence, depending on logic and on whether some of the areas are more sensitive than others (these are better left until the end). The third stage invites the consideration of and choice between the most appropriate open-ended questions that are related to each area. Finally, possible probes and prompts are listed (Smith & Osborn, 2003).

The questions for the interview guide were generated on the basis of the following four sources: the research questions as outlined in Chapter 2, literature on subjective time use, literature on well-being and literature on life goals. 28 questions were originally generated, excluding prompts and demographics. The number of questions had to be cut, and after several drafts was reduced to 10, a sufficient and

manageable number for an hour long interview. A series of seven pilot interviews carried out (see 4.4.2.1) were particularly helpful in finalising the interview guide.

The final interview schedule, which can be found in Appendix 2, consisted of several parts. The first question “How do you usually spend your time?” was very general in nature and served as an opener, or an introduction. The next four questions with prompts were used to address the primary research questions 1.1 to 1.5. The nature of well-being and the relationship between well-being and time use (research questions 2.2 and 2.3) were explored through the subsequent two questions. The next two questions on life goals and life goals – life coherence addressed the research question 3.1. The closing question offered participants an opportunity to bring up other issues that they felt were relevant to the interview. Finally, the researcher gathered the necessary demographic information through the four concluding questions.

4.4.2.1. Pilot study

Pilot interviews were used to ensure that the interview schedule was fully appropriate for the study. They assisted in the assessment of the most appropriate question order, whether the questions were easy to understand, and whether the interview elicited sufficient information for the research questions under investigation.

Seven individuals aged between 30 and 58 took part in the pilot stage. Six were male and one was a female. Six were married or cohabiting, one was divorced. All but one participant had children, although three of them had children over 18 years of age. The subjects were from various professional backgrounds, including psychology, medicine, business and public sector management. Two people were educated to “A” levels, one to Bachelor’s degree level and the remaining four to either PhD or MD level.

The pilot interviews were recorded but not transcribed. The researcher listened to each of the pilot tapes two to three times, summarising each interview in a series of bullet points and making notes about the possible impact of this data on the final guide.

Following the pilot, a number of questions were reworded, some were excluded and others added (e.g. a leading and closed question “Are you anxious about time at all or not”? was replaced with “How do you feel about your use of time”?) and the order of the questions altered significantly (of course, this only applied to the order of questions in the interview schedule, as semi-structured interviews allow deviation from the schedule during the actual interview situation). The researcher learned from these seven pilot interviews the importance of memorising the interview questions, so that the flow of conversation is not broken by looking at the interview guide. The researcher also developed greater skill in following the person’s thoughts in the process of the interview, bringing questions up when they appear most appropriate, because the timing of the questions transpired to be an important issue.

The researcher asked the pilot participants to comment on the interview as a process, and certain problems such as discontinuity and lack of flow were brought up by some. Attempts were made to meet these points and the question order was modified in the main interviews.

One participant felt that the interview should be focused more on time management at work and the nature of work itself. He suggested that the interview guide should include the following questions: How relevant does your job feel to you? How important/central is it to your life? If you could do any job in the world, what would it be? In what way is your job satisfying to you? How happy are you with your time management at work? These suggestions were carefully considered, but it was decided that they do not adequately reflect the main research topic and thus they were not incorporated into the final guide.

Because of significant changes in the interview schedule, the pilot interviews were not included in the final analysis. However, the current section will briefly review the outcomes of these interviews.

Several preliminary themes or factors that contribute to being satisfied with time were identified from a brief thematic analysis of the pilot. All of these themes appear strongly in the final analysis. They included:

- Achievement, completion of tasks;
- Balance and variety of activities;
- Spending time on something considered worthwhile;
- Listening to oneself when making temporal decisions.

All participants noted that for them time is intimately connected with well-being. Feeling that time is wasted, especially, was felt to be associated with lower well-being.

4.4.3. Ethical considerations

The study adhered to the British Psychological Society's *Code of Conduct Ethical Principles and Guidelines*, which require psychology researchers to carry out research in accordance with the highest standards of scientific integrity and to "...ensure that interests of participants in research are safeguarded" (1993, p.1). An ethical approach was used throughout from the recruitment of participants to the collection of data. Ethical approval was sought and obtained from the Open University Human Participants and Materials Ethics Committee. It is enclosed in Appendix 3. The following ethical issues were considered and attempts were made to address these issues:

1. The possible dangers and any foreseeable threats to psychological well-being, health, values or dignity because of taking part in the interviews.
2. The need to inform the participants that they reserve the right to withdraw from the study at any time.
3. The necessity to obtain informed consent to the investigation
4. The need to explicitly communicate to my participants that the information they provide would remain confidential, and although the interview data and analysis

would enter the public domain, the identities of the contributors would remain anonymous. Furthermore, the audiotapes would be destroyed upon completion of the study.

5. The need to identify what support may be available to participants should they experience distress during or after the interview.
6. Issues of deception (this was not necessary at any stage of the research process).
7. Debriefing participants with any necessary information in order to complete their understanding of the nature of the research. A promise was made to participants to send them the final research findings.

These issues have informed the nature of the Invitation and Information sheet and the Consent form that can be found in Appendix 4. These were designed to outline the nature and purpose of the research to the participants and to address the ethical issues considered above. These forms were included into information provided to the Human Participants and Materials Ethics Committee, and attracted its approval.

The invitation and information sheet and consent form were emailed to participants prior to the study, so that they could consider it and have an opportunity to ask questions prior to the interview. The participants were then presented with these forms before the interview began and asked to sign them.

During the study and analysis the participants were referred to by a two-letter code. Audio tapes were labelled with this code prior to transcriptions, which were carried out by a professional transcriber, to overcome the limits of the researcher's time within the two-study PhD process.

In accordance to the Data Protection Act, the interview tapes were locked in a filing cabinet in the researcher's office and kept separately from the participants' personal details, which were only stored only in the researcher's personal computer.

4.5. S1 data analysis

4.5.1. Steps of data analysis in IPA

Commonly, the method of analysis in IPA initially follows an idiographic approach, beginning with particular examples and working towards a more general categorisation (Smith, Jarman & Osborn, 1999). The process starts with familiarising oneself with the interviews and making brief notes as one goes through them. These initial notes are then developed into so-called emergent themes. The emergent themes from several interviews are gathered together, connections between them identified so to allow for clustering the emergent themes under super-ordinate themes, and finally a table of master themes is developed.

Detailed guidance on how to carry out IPA has been offered by Smith et al (1999) and Smith and Osborn (2003). The data analysis in the current study followed these descriptions as a general guide, selecting from the analytical processes recommended for both small and larger sample sizes. The section below will describe the step-by-step process used by the researcher.

4.5.2. Data analysis in the study

- The semi structured interviews were audiotaped by the researcher and then transcribed by a professional transcriber. The transcriptions were then checked through by the researcher.
- Whilst transcribing was in process, the researcher listened repeatedly to the tapes to familiarise herself with the material.
- With IPA, there is an initial focus on one transcript³, which is read several times to increase familiarity with the text. Preliminary thoughts were noted in the left-hand margin, whilst the right-hand was used to document the emerging themes.

³ The transcript “BP” was selected for this purpose, because it was particularly rich in data

- Each transcript was then read several times in turn and preliminary themes, initial thoughts and other notes were applied to the segments of text. These segments could have been as small as a part of a sentence to a couple of paragraphs long. The length was determined by the theme they reflected. IPA recognises the possibility that the same passage can be interpreted at several levels of analysis (Smith, 2004), thus different themes were sometimes applied to the same passage.
- Until then, the notes were made on the paper version of the transcripts, from this point onwards, the software for qualitative analysis, NVivo, was utilised.
- *Emerging themes* related to the research questions were identified from all the transcripts. The identified themes for the individual cases were organised into overarching themes, which pulled together common themes appearing in the individual protocols at a higher level of abstraction or generality. They were summarised on paper and connections were sought between them, to allow the clustering of similar themes to emerge. The computer clustering then followed, that was greatly assisted by the software used.
- Once the clustering was completed, names were found for these overarching or *super-ordinate themes*. As it was a relatively large scale analysis for IPA, a few themes that did not fit into clusters, were not rich in examples, or were too case-specific were dropped (e.g. life history and occupation).
- Once this process was completed, the master-theme list was applied again to the transcripts, looking for the missing instances of some of the themes and confirming the prevalence of others. As this qualitative analysis is a cyclical process, some new emergent themes were identified in this process, some of the clustering modified and the names of some of the superordinate themes changed.
- Having gone through each transcript, a master list of super-ordinate and emergent themes was finalised. The themes included in this list were selected not only

on the basis of their prevalence within the data, but also on the basis of the richness of passages and seeming significance.

- Finally, the 10 super-ordinate themes identified were allocated to four broad categories of Motivation, Organisation, Execution and Evaluation.

It is important to note that there were several lines of analysis. The process described above refers to identification of factors relevant to the research questions 1.1 to 1.5, and 3.1. A similar, albeit significantly briefer process was performed in an attempt to throw further light on the research questions 2.1 to 2.3 (see chapter 5 for further information).

The responses related to the research questions looking at the nature of relationships between well-being and satisfaction with time use were also interrogated using thematic analysis, however, a far smaller number of themes emerged.

The next chapter offers the results of this analysis, presented as themes and illustrated by verbatim quotations that allow the unique nature of each participant's experience to re-emerge through the extracts used.

4.5.3. Reliability and validity

Qualitative methods have been criticised for the potential lack of *reliability* and *validity* in terms of generalisability. The notion of validity, however, is as important in qualitative research as it is in quantitative. Qualitative methodology employs different means of rigor than the quantitative one (which operates with the notions of control, randomisation, replication, etc), but this does not necessarily make it less scientific.

Qualitative research needs to be judged against criteria appropriate to this approach (Smith, 1996). For example, validity or verification in qualitative research is usually approached in terms of consistency and fit. It is possible to argue that the results of a qualitative study are valid if they present evidence that the thematic description offered provides a good insight into the experiential world of the participants (Bennett-

Woods, 2004). There have been many suggestions as to which principles should guide the qualitative process. Creswell (1998), for example, offers eight verification procedures for qualitative research, the use of at least two of which is recommended in any study:

1. Prolonged engagement and persistent observation;
2. Triangulation;
3. Peer review of debriefing;
4. Negative case analysis;
5. Clarifying researcher's own bias;
6. Member checks;
7. Rich thick description;
8. External audit.

Patton (1990) recommends testing rival explanations, use of negative cases and multiple triangulation methods for enhancing the quality of analysis. Lincoln and Guba (1985) suggest a number of techniques to ensure credibility: prolonged engagement with the phenomena, persistent observation, triangulation, peer debriefing, negative case analysis, and member checks. Several such recommendations were gathered together by the researcher and analysed one by one with regard to whether or not these were utilised in the current study. Eight of the eleven methods specified below were used in the study as most appropriate.

1. Clarifying the researcher's *own biases* (Smith, 1996) is an essential element of phenomenological method. The researcher has tried to be transparent about her assumptions, which are outlined in Chapter 1. She has made a deliberate effort to be aware of her prior assumptions in the course of analysis, attempting to bracket them and applying phenomenological reduction.

2. A number of researchers recommend the use of *thick descriptions* (or a detailed narrative summary of each participant's account, e.g. Creswell, 1998), which was not feasible within limited time, as this study formed only one half of the dissertation. If thick descriptions are usually the aim of a phenomenological study, they are not a requirement in IPA.
3. *Member checks* in which the researcher solicits informants' views on the credibility of the findings and interpretations (Lincoln & Guba, 1985), were also not possible due to time limitations. However, the transcripts of the interviews were sent to three participants who expressed a desire to receive them. Only one of them commented on the transcript, stating that it was an accurate representation of our conversation.
4. *Prolonged engagement* with the data (Creswell, 1998) was present during the analysis stage, although no other methods of data collection (e.g. observation) were employed.
5. *Triangulation* is a process by which a researcher can ensure that the findings are not simply a result of using one particular method, a single source, or one interviewer. Patton (1990) lists four types of triangulation: (1) through different data-collection methods; (2) checking the consistency of data sources within the same qualitative method and looking at the consistency of information derived at different times and through different means; (3) using multiple analysts to interview, or to analyse the data; (4) using multiple perspective or theories to interpret the data. Triangulation in the current study was of three different types. First of all, this PhD employed two very different methodologies to look at the same issues. Secondly, it was observed that the themes that arose from pilot interviews were very similar to those from the main interviews. Triangulation with the literature was used to show that the findings derived from qualitative research and from some quantitative studies were consistent with the findings from the current one.

6. Another researcher can be asked to consider whether the analysis is *internally consistent* and *coherent* (Smith, 1996; Creswell, 1998). Another postgraduate research student was asked to rate a randomly chosen transcript with the super-ordinate themes, the definitions and descriptions of which were supplied. As the size of passages coded under each theme was undetermined, the comparisons were made on the basis of the presence of themes within each paragraph. More specifically, the comparison was set to evaluate whether the second researcher had independently employed the themes used by the first researcher in each paragraph. The results of the comparison between two coders indicated that the second researcher picked up every theme originally employed by the first researcher, except on five occasions. This suggested that the researcher's own original analysis was consistent.
7. *Auditability and presentation of evidence* (Smith, 1996). Even with explicit clarification of the researcher's assumptions, there is still a danger of bias. Smith suggests that a reader's reactions to the interpretation of the researcher should act as one of the validity checks. There should be enough information provided at all stages of analysis to be able to consider alternative interpretations. For this reason, a detailed account of the IPA process was provided in sections 4.5.1 and 4.5.2. Furthermore, verbal extracts were used to illustrate the descriptions of the themes. A further external check occurred through supervisions.
8. *Negative case analysis and rival explanations* (Creswell, 1998; Patton, 1990). As well as considering alternative explanations, elements that contradict (or appear to contradict) the emerging themes were also examined. Examples that did not fit the initial themes were kept in a separate folder and carefully considered once the analysis was nearing completion.
9. *Generativity*. There is an argument that the standards of research should be evaluated by the research potential to generate further studies and other contributions to society. The current study has many implications that are discussed

in Chapter 8, including a number of further research questions that can be drawn from the conclusions.

10. *Generalisability and transferability.* Whether or not the data obtained through this study can be generalised depends on whether the interviews with the particular participants represent common experiences of time use or not. The fact that it was a real world sample and a study carried out in naturalistic conditions (rather than in a laboratory) contributes to generalisability, though, of course, it was a small exploratory study.

11. *Intellectual rigor and professional integrity.* Patton (1990) states: “A qualitative analyst returns to the data over and over again to see if the constructs, categories, explanations, and interpretations make sense, if they really reflect the nature of the phenomena. Creativity, intellectual rigor, perseverance, insight – these are the intangibles that go beyond the routine application of scientific procedures” (p. 477). Arguably, the criteria of intellectual rigor and professional integrity is a very subjective one, but essential. The researcher endeavoured to undertake this study in line with these principles.

4.6. Study 2 objectives

The rationale underlying the second study was to investigate if the factors contributing to time use satisfaction identified in the previous qualitative study are replicated with a larger sample and to see which ones carry more weight. The second objective was to systematically examine the relationships between satisfaction with time use, subjective well-being, sense of coherence and locus of control. An investigation of the possible relationship between satisfaction with time use and well-being is the key problem addressed in this thesis and is reflected in the research questions 2.2 and 2.3. The literature review suggested sense of coherence can be viewed as an essential correlate of well-being (see 3.3.3.1. for further discussion), which is why a scale to measure this

variable was also added to the questionnaire. Locus of control, on the other hand, was measured because of a strong possibility that this construct underlies perceived control over time, deemed as important by a number of scholars (see 2.3.2.1). Additional rationales for the relevance of the measures selected to the research questions and hypotheses can be found in section 4.9.2.

Not all of the original research questions were addressed by the second study, because some of them did not lend themselves well to quantitative methods of analysis. Question 1.1. “*What is the participants’ experience of their time use*”? was not taken beyond the qualitative stage because of the time and scope limitations of this PhD. Question 2.1. “*What meaning do participants assign to the notion of well-being/happiness*”? was originally intended to be investigated only as part of a qualitative study (see section 3.8). The remaining research questions lent themselves well to quantitative investigation and four hypotheses were generated on their bases. The specific research questions and hypotheses for the second study can be found in the beginning of chapter 6.

4.7. Study 2 research design

As the objectives of this study were to test if the factors identified in the previous study could be replicated with a larger sample and to systematically examine the relationships between the variables of interest, the quantitative approach was considered most appropriate. The study employed an exploratory survey and correlational design, adopting a one-shot cross-sectional approach to its target population. The adult Open University students were chosen as it was believed that time was an important issue for them, and the researcher had access to this population. A randomised sampling strategy was used in order to maximise the opportunity to generalise from the sample to the wider research population.

Considering available resources and time constraints, the method of data collection chosen was postal questionnaires, consisting of one researcher-designed questionnaire on satisfaction with time use and four well-known scales: Sense of Coherence Scale, Locus of Control Scales, Satisfaction with Life Scale and PANAS Scales. The questionnaires were sent to 400 randomly selected students on all Open University courses. The analysis was based on the data from the 173 respondents who completed the survey. The analysis included frequency data, factor analysis, multiple regression and correlational analytical procedures. The following sections will discuss the sample, data collection and procedure, and analytical strategies in more detail.

4.8. Study 2 participants

In the current study the target population were the open learners (Open University students). This choice was made for several reasons. First of all, it was reasoned that this target population is comprised by individuals for whom time is likely to be an important issue. This was believed because the open learners often combine the demands of study, work, leisure and family life. Secondly, a number of previous time use studies used part-time or distance learning student samples (e.g. Arthur and Tait, 2004; Macan, 1994; Macan, 1996), and using a similar target population would allow for more direct comparisons. Thirdly, most participants in the first qualitative study had to juggle different demands on their time (e.g. work and family, study and family, study and work) and it was believed that these features (as well as similarities in age and number of children, see section 4.8.2) provided a continuity between the two samples. What was deemed important by the researcher was that the study did not utilise easily accessible samples of undergraduates in mainstream universities, because these are usually comprised of very young adults whose life circumstances are very different from the majority of adult population. Finally, as an Open University research student herself, the researcher had a somewhat privileged access to this population.

It was not expected that this sample will be representative of the wider population, however, it permits some logical generalisations regarding those who are also likely to experience a high level of demands on their time. It is clear, however, that it would not be possible to generalise from the results of this study to the wider population.

4.8.1. Sampling

The best way to ensure that a representative sample is obtained is through some form of *random selection* strategy. For a true random sample to emerge, it must be possible to identify all members of the target population, and then using some randomisation procedure (preferably a computerised random selection of people from a database), select those who are to be included in the sample. This was the strategy used in the current study. The sample was randomly drawn from all Open University students residing in Great Britain, excluding those who were already sampled for a different study during the 2003/2004 academic year. The procedure was carried out by the Open University Survey Office in the Institute of Educational Technologies. It was intended to mail the questionnaire to 500 potential participants, but in accordance with the recommendations made by the Student Research Project Panel, it was only sent to 400.

4.8.2. Demographic characteristics of the sample

The demographic characteristics of the sample are summarised in Table 2. These characteristics were gathered through the final items in the questionnaire and derived from the information held at the Open University database. The questions asked covered partnership status, number of children and employment status. The variables of level of education, disability, age and gender were derived from the database.

The sample included 59 (34%) men and 114 (66%) women. 88% of the sample were of White background, 2.4% were of Black, 1.2% were of Asian, and 9.3% were either Other, Mixed or did not provide the data. 8 or 4.6% of participants were disabled.

| Category | Variable | n (N=173) | % |
|---|---|-----------|------|
| Gender | Male | 59 | 34.1 |
| | Female | 114 | 65.9 |
| Ethnic origin | 1, X. No data | 13 | 7.5 |
| | D, F. Asian | 2 | 1.2 |
| | G, H, J. Black | 4 | 2.4 |
| | L, N, P. White | 151 | 87.9 |
| | R. Other | 1 | 0.6 |
| | V, W. Mixed | 2 | 1.2 |
| Age | Under 20 | 0 | 0 |
| | 21-30 | 32 | 18.5 |
| | 31-40 | 54 | 31.2 |
| | 41-50 | 50 | 28.9 |
| | 51-60 | 20 | 11.6 |
| | 61 and over | 17 | 9.8 |
| Partnership status | Married | 101 | 58.4 |
| | Single | 33 | 19.1 |
| | Widowed | 3 | 1.7 |
| | Divorced | 14 | 8.1 |
| | Living with a partner | 21 | 12.1 |
| | Missing data | 1 | 0.6 |
| Number of children living with a respondent | 0 | 89 | 51.4 |
| | 1 | 27 | 15.6 |
| | 2 | 39 | 22.5 |
| | 3 | 15 | 8.7 |
| | 4 | 2 | 1.2 |
| | 5 | 1 | 0.6 |
| Disability | No | 165 | 95.4 |
| | Yes | 8 | 4.6 |
| Employment status | Employed full-time in paid work | | |
| | Employed part-time in paid work | 97 | 56.1 |
| | Self-employed/freelance | 24 | 13.0 |
| | Doing voluntary work | 11 | 6.4 |
| | Doing other unpaid work | 6 | 3.5 |
| | Permanently unable to work | 1 | 0.6 |
| | Temporarily sick or unable to work | 5 | 2.9 |
| | Retired | 3 | 1.7 |
| | Looking after home or family | 9 | 5.2 |
| | Taking time out in order to travel | 13 | 7.5 |
| | Due to start a job within the next moth | 0 | 0 |
| | Unemployed and looking for employment | 2 | 1.2 |
| | Unemployed and not looking for employment | 1 | 0.6 |
| | | 0 | 0 |
| | Doing something else | 1 | 0.6 |
| Highest level of education | A. No formal qualification | 1 | 0.6 |
| | B. CSE.RSA School certificate | 3 | 1.7 |
| | C. Lev 1-4 subjects | 14 | 8.1 |
| | D. A Lev 1 subject | 6 | 3.5 |
| | E. ONC/OND | 2 | 1.2 |
| | F. HNC/HND | 17 | 9.8 |
| | G. Teachers certificate | 5 | 2.8 |
| | H. University Dip | 15 | 8.7 |
| | I. O-Level 5+ subjects | 15 | 8.7 |
| | J. University 1 st degree | 44 | 25.4 |
| | K. Postgraduate level | 10 | 5.8 |
| | L. Professional qualification < A Level | 3 | 1.7 |
| | M. Professional qualification < Degree | 5 | 2.9 |
| | N. Professional qualification >= Degree | 8 | 4.6 |
| | V. A Lev 2+ subjects | 20 | 11.6 |
| | No data | 5 | 2.9 |

Table 2: Study 2 demographics

The minimum age of participants was 23, and the maximum – 85. The mean age was 42.37, which was virtually identical to the mean age of the participants in the first study. The majority (60%) of the sample were between 31 and 50 years of age.

Over half of the sample (58%) were married and a further 21 (12%) were cohabiting, meaning that 70% in total were in long-term relationships. These figures compare favourably with the partnership status characteristics of the first sample, 52%, 29% and 81% respectively.

49% of the sample had between 1 and 5 children living with them, which is a very similar figure to the first sample (48%). 51% did not have children living with them, which does not mean, however, that these respondents do not have children.

69% of participants were employed either in full or part-time work, and a further 6.4% were self-employed (or working freelance), which equates to 75% of participants in paid work. 13 or 7.5% were looking after the house and 5.2 % were retired. The rest, 11% described themselves in different circumstances (see Table 2).

There was a high diversity with regard to the highest level of education, ranging from no formal qualifications to a postgraduate qualification. A substantial majority (57%) were educated to a high level, according the Open University system of classification, incorporating the codes F, G, H, J, K, N. 21% had a low (A, B, C, I, L) level of education, whilst 23% were of medium (D, E, M, V) level of education. Somewhat surprisingly, the highest level of education of this group of participant approximated that of the participants in the qualitative study, 77% of whom could be described as falling into the “high” level of classification adopted here.

Given the number of females who have returned the questionnaire, the sample is not equally balanced in terms of gender. Also, the sample is not representative of younger adults, as no participants under 23 have returned the questionnaire (despite increasing numbers of younger students on the Open University courses). This suggests that despite random selection, the sample may be somewhat biased.

4.9. Data collection

4.9.1. Setting and procedure

The questionnaire was mailed to 400 Open University students randomly chosen from all Open University courses which had not been sampled during the 2003-2004 academic year. The mailing included the Information and Invitation letter, explaining the purpose of the survey and why it might be important for the respondent to answer (see Appendix 5). Participants completed the questionnaire in their own homes and returned it in the pre-paid envelope.

Another letter was sent four weeks later to those who have not sent their questionnaire back, reminding the recipients of the survey and encouraging them to return the completed questionnaire.

Data collection and entering were carried out by the Open University Survey Office in the Institute of Educational Technology.

4.9.2. Measures

The postal questionnaire used in the second study consisted of a researcher-developed questionnaire on satisfaction with time use and four well-known scales: Sense of Coherence Scale, Locus of Control Scales, Satisfaction with Life Scale, PANAS Scales. The researcher-developed questionnaire was derived from the conclusions reached by the first study and was used to explore the research questions 1.2, 1.3, 1.4 and 3.1. The inclusion of the existing scales, on the other hand, contributed to research questions 1.5, 2.2 and 2.3. The final questionnaire can be found in Appendix 6.

It was intended that the questionnaire would take about half-an-hour to complete, primarily because longer measures tend to attract a significantly lower return rate.

The subsequent six sections will guide the reader through the process of development and piloting the first questionnaire and of selecting the appropriate scales for measuring subjective well-being, locus of control and sense of coherence.

4.9.2.1. Satisfaction with time use questionnaire

This researcher-developed questionnaire was designed to measure satisfaction with time use and the factors that contribute to it as identified by the first study. Several criteria were used to guide its development, including (Sapsford, 1999; Evans et al 1979):

- **Relevance:** whether or not the questions can elicit the data appropriate to the research problem.
- **Comprehensiveness:** whether the totality of questions adequately capture the necessary aspects of the research problem (within permitted length constraints).
- **Comprehensibility:** whether the questions are unambiguous and easy to understand.
- **Appropriateness of form:** whether the data elicited by the questions is appropriate for the analysis planned.
- **Feasibility:** whether the overall task is feasible, or, perhaps, the questionnaire is too long or too complex.

It was intended that the questionnaire would be largely comprised of items reflecting the ten factors specified below. These factors were the themes that were identified from the qualitative study (see Chapter 5). Appendix 7 summarises the ten themes and their corresponding items.

1. Liking what one does (2 items)
2. Life goals and worthwhile activities (5 items)
3. Balance and variety of activities (13 items)
4. Prioritisation and acceptance of limits (6 items)

5. Time management mechanics (11 items)
6. Achievement vs. wasting time (11 items)
7. Discipline and adaptability (9 items)
8. Taking responsibility and feeling in control (5 items)
9. Reflection, evaluation (3 items)
10. Time anxiety (4 items)

Although most of the themes were expressed via 4 to 6 items, some themes attracted a larger number of questions. This was because the questions were designed to reflect each theme in its complexity, and some of the superordinate themes (e.g. time management mechanics) were comprised of a larger number of emergent themes, whereas other themes (e.g. liking what one does) were comprised of a smaller number of emergent themes (see Chapter 5).

The majority of items were designed by the researcher herself, who took care to express the themes in both positive and negative variants. In addition, items in various pertinent existing scales were examined. A number of items from these scales thought to be highly appropriate were also included in either their original or slightly modified format. For example, four items (no 1, 18, 21, 64, and 67) were borrowed from Ryff's 84-item Psychological Well-Being Scales (Ryff & Keyes, 1995), with permission. Two items from Bond and Feather's (1988) Time Structure Questionnaire (nos. 5 and 70) were included. Two items (no 3 and 47) were modified from the Time Use Efficiency Scale (TUES; Kelly, 2003b). Item no. 20 was modified from the Achievement Orientation Scale by Ray (1979). One further item (no. 61) was included from the Purpose in Life Scale developed by Harlow, Newcomb & Bentler (1987).

Two items from the reflection/evaluation theme were intended to appraise satisfaction with time use directly. The one-item measure of satisfaction with time use (no 26 "Overall, I am satisfied with the way I use my time") was similar to that utilised

by Hafstrom and Paynter (1991) to evaluate the satisfaction with time use of the wives living on family farms. Item 15 “I am not good with using time” was added in order to offer a negative form of a time use satisfaction question.

Whilst the Open University Survey Office took the primary responsibility for the layout, care was taken to develop clear instructions and locate the items in such an order that facilitates openness and sustained interest. Thus, for example, less controversial items that participants can easily associate with time use were located in the beginning of the questionnaire, whereas items related to meaning and purposefulness that require a greater extent of self-disclosure, were located in the second half.

The original item pool in excess of 120 was subjected to examination in line with the criteria specified in the beginning of this section (Evans et al, 1979). The researcher invited comments from her supervisors and other colleagues. The questionnaire was severely cut back in line with the survey office recommendations, who advised that a shorter questionnaire was likely to get an enhanced response rate. The ensuing 75-item questionnaire underwent the piloting procedure described in the subsequent section, which resulted in a 70-item questionnaire that was administered to the main sample.

4.9.2.2. Pilot study

A pilot study was conducted to examine the appropriateness of the questionnaire. As the questions were mainly designed by the researcher herself, it was important to examine whether they were expressed comprehensibly and appropriately to tap into the construct of satisfaction with time use.

Although piloting was not necessary for the existing scales, as their properties were already well-known, these were also included in the pilot questionnaire in order to gather information on the overall completion times.

Each pilot questionnaire was administered as an attachment to an email with four evaluation questions in the body of the email. This qualitative assessment was necessary to examine whether any aspects of satisfaction with time use were not included in the questionnaire, or whether any aspects of the questionnaire were less comprehensible or confusing. One of the questions assessed the time participants took to complete the questionnaire, and another was used to inquire whether the questionnaire led to an experience of any negative psychological states (which was not expected). This procedure was intended to overcome some of the problems associated with single-researcher design that can be potentially biased. This section also presents an overview of this qualitative data collection. Furthermore, where changes were made to the measures following the pilot study results they will be indicated. The evaluation questions used are listed below.

1. How long did it take you to complete the questionnaire?
2. Did you find any of the questions ambiguous or difficult to understand?
3. Do you think that some changes are required? If so, what?
4. How did you feel after completing the questionnaire?

Pilot study sampling

20 respondents from the UK completed the questionnaire. This convenience sample included friends and colleagues of the researcher. A large proportion of the pilot sample were Open University students. Respondents were not remunerated for taking part in the study. The questionnaire was sent and returned by email.

A brief overview of the pilot results

The respondents reported that completion of the questionnaires took them between 7 and 28 minutes, with 16 to 20 minutes being an average. No negative psychological states were mentioned, although one participant commented that she generally dislikes

Likert-type scales, and another pointed out that the questionnaire prompted him to think about the meaning of his life.

With regard to the items included in the questionnaire, a careful analysis was made of responses to the evaluation questions 2 and 3. Although almost all subjects agreed that they found the survey straightforward, some responses pointed towards a need for modifications to certain specific content and wording. Furthermore, the completed questionnaires were screened following recommendations set out by Goode and Hatt (1952), as follows. The items were examined for a high proportion of “don’t know” answers, as these might indicate difficult, ambiguous or poorly worded questions. The questions were also systematically inspected for lack of order in the answers (which may indicate either poor wording or poor conceptualisation), all-or-none responses, a large number of qualifications or irrelevant comments and a high proportion of unanswered questions.

This helpful procedure led to the identification of certain inconsistencies in some of the answers. Several alterations made to the main questionnaire to overcome these are detailed below.

19 items changed wording, including, for example:

- “I don’t procrastinate” to “I rarely procrastinate” (because it is highly unlikely that one does not procrastinate at all, as the original wording suggests).
- “I often ask myself: “Am I making the best use of my time at this moment in time?” to “I often check if I am making the best use of my time” (the revised wording appears simpler and more straightforward).
- “I strictly separate different areas of life (e.g. leisure-work, etc)” to “I have strict boundaries between different areas of life (e.g. leisure-work, etc)”

Item no. 43 “I tend to do the most important things first” was added to the questionnaire, whilst the following five items were removed from it:

- Saying “No” is difficult for me
- I take a long time to get going
- I can think of many ways to reach my current goals
- I often plan much more into a day than I can actually get done
- I have flexible boundaries between different areas of my life

Finally, the order of several items was changed, although the questions remained adequately mixed in order to avoid the prevalence of one theme in any one place.

The next four sub-sections will review the four scales incorporated into the final questionnaire, which were used to operationalise the constructs of well-being (including life satisfaction, affect and sense of coherence) and locus of control. These constructs were chosen on the basis of the literature review and in accordance with the revised research questions. The researcher would have liked to include a measure of eudaimonic well-being into the questionnaire, but it was not possible due to the poor definition and operationalisation of this construct at the time of carrying out the study (see section 3.7). A number of possible scales measuring subjective well-being and locus of control were considered for inclusion and reasons for choosing the specific scales are discussed below. Overall, the validity, reliability and length of a scale were the primary factors taken into consideration when deciding on which scales to include.

4.9.2.3. Satisfaction with life

An early measure of life satisfaction was the question used by Campbell et al (1976) “How satisfied are you with your life as a whole nowadays”? However, as there are some doubts over how adequate single item measures of life satisfaction are (Diener, 1984; Argyle, 2001), it was decided to use a multi-item measure in the current study.

The Satisfaction With Life Scale (SWLS) developed by Diener et al (1985) was chosen to measure the cognitive component of well-being. This instrument was

selected because of its clear prominence in previous studies of psychological well-being and adjustment (Argyle, 2001). Following the traditional operationalisation of the concept of well-being as a combination of life satisfaction, high positive and low negative affect (see Chapter 3 for detailed discussion), SWLS is often offered as the primary measure of the life satisfaction component (e.g. Diener et al, 2002).

SWLS consists of five questions measured on a 7-point Likert scale. The length of this measure was considered appropriate for inclusion in the questionnaire with its lengths restriction.

Amongst the other alternative options considered was the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). It has been shown to possess high internal consistency, a unitary structure, stability over time and reasonable convergent and discriminant validity. Although similar to SWLS in many respects, including length, reliance on cognition and high levels of correlations between the two scales (bordering on and even exceeding 0.70 on some occasions, suggesting a possibility of equivalence), the Subjective Happiness Scale is not intended to explicitly discriminate between cognitive and affective dispositions. On this occasion, the researcher chose the widely used SWLS, but accepts that the SHS is a useful alternative.

Validity and reliability

The SWLS appears to possess favourable psychometric properties, including high internal consistency. For instance, in Diener et al's (1985) original paper, test-retest reliability over two months was .82 and the alpha coefficient was .87. All scale items fell under one single factor, accounting for 66% of variance. In the current sample the alpha coefficient was .90.

The scale has moderately strong correlations with other subjective well-being measures (generally not exceeding .70). It also has adequate criterion validity coefficients, in terms of correlations between satisfaction with life scores as self-

reported by participants and as estimated by the experimenters who interviewed them (Diener's et al, 1985).

In one subsequent study Lucas, Diener and Suh (1996) considered the discriminant validity of SWLS through the use of several methods. Their analysis showed that life satisfaction is clearly discriminable from positive and negative affect, as well as from conceptually similar constructs such as optimism and self-esteem.

4.9.2.4. Positive and negative affect

The widely used Positive and Negative Affect Schedule (PANAS), introduced by Watson, Clark and Tellegen (1988) was chosen for inclusion into the questionnaire. It includes 20 emotion adjectives that are evaluated on a 5-point scale to indicate the amount of time respondents spend experiencing each emotion. PANAS can be administered with different temporal instructions, ranging from "right now" and "today" to "during the past year" and "in general".

Argyle (2001) notes that the most widely used affect measure is Bradburn's (1969) Affect Balance Scale, which assesses the balance of positive and negative affect experienced during the past four weeks. However, several findings point towards the unreliability of this measure, with an alpha coefficient of just over .5 (Watson, Clark and Tellegen, 1988). Lucas, Diener and Larsen (2003) have compared 11 widely used measures of affect, and found that all of them (with the exception of Bradburn's scales) exhibit good internal consistency and validity. Many of these measures, however, are very long, with up to 300 items, with the exception of one one-item (that only measures pleasantness) and Bradburn's scales. Thus, the Watson, Clark and Tellegen (1988) PANAS appears to be the shortest well-known scale with excellent psychometric properties (see below).

Validity and reliability

PANAS was shown to be highly internally consistent, with the subscales largely uncorrelated with each other and stable over a 2-months period. More specifically, Chronbach's alpha coefficient has been found to range from .84 to .90 for student, non-student and psychiatric samples (Watson, Clark and Tellegen, 1988). In the current sample, internal consistency of both scales was .88. Depending on the temporal instructions used, correlations between the scales range from -.12 to -.23. Test-retest reliability over eight weeks yielded acceptable coefficients, which tended to increase as the rated time frame lengthened. Factorial analysis confirmed the scale validity with items loading strongly (above .5) on two factors accounting for nearly all common variance (between 87 and 96%, depending on temporal frame used).

Watson, Clark and Tellegen (1988) also provide evidence of convergent and discriminant validity. Thus PANAS has excellent convergent correlations with appropriate but lengthier measures of similar underlying factors (.76 to .92), with the exception of the Bradburn scales. Their studies also demonstrate appropriate correlations between negative affect and measures of distress and psychopathology, which are, however, not high enough to indicate inter-changeability.

Overall, PANAS is offered as a very valid and reliable instrument, widely used in many studies.

4.9.2.5. Locus of control

Locus of control (LOC) was developed as a concept in 1966 by Rotter and since then has been examined by many studies against hundreds of diverse dependent variables. It is, however, subject to much debate, as both theoretical and psychometric questions have been raised about a common lack of convergence in the results.

As discussed in section 2.3.2.1, LOC refers to either believing or not that one can have an impact on the course of events. Some researchers believed locus of control

to be a stable personality dimension, but Rotter himself (1975) disagreed with this claim. It is now agreed that LOC is not a fixed personality trait and can vary according to situation. Rotter further challenged the oversimplified conceptualisation of LOC that implied that internality is associated only with positive consequences, whilst externality is only associated only with negative consequences (Fournier and Jeanrie, 2003). Rotter argued for the unidimensionality of the locus of control scale, whilst acknowledging the presence of some sub-factors. A substantial body of research, however, supports the multidimensional characteristics of the majority of locus of control scales, varying from two to three factors with several sub-factors (Fournier and Jeanrie, 2003).

According to Lefcourt (1991), Rotter's original Internal-External Locus of Control Scale (I-E scale, 1966) is the most often cited locus of control questionnaire, used in 50% of studies. Another commonly used measure Internality, Powerful Others, and Change Scales (IPC scale), based on three factors was developed by Levenson (1974, 1981). Also common are the Work Locus of Control Scale (Spector, 1988) and the Vocational Locus of Control Scale (Fournier et al, 1996) but the latter two scales are not applicable for the current study, because they focus on one particular domain.

The choice of the scale for the current project was centred around the I-E and IPC scales as these appear to be the best recognised measures in the field. Nevertheless, the sheer size of these scales (23 and 24 respectively) in the situation where the size of the final questionnaire was limited, encouraged the researcher to search for abridged versions of these scales. Sapp and Harrod (1993) developed a brief version of Levenson's Locus of Control Scale, consisting of three factors (internal control, chance, and powerful others) and nine questions. Reliability of the scales was shown to be moderate to acceptable, construct validity was shown to be satisfactory and the results also demonstrated the predictive validity of the reduced scale.

However, a brief Rotter's locus of control scale was chosen for the current study. Developed by Lumpkin (1985), it consists of only six items, which makes it

highly appropriate for the present research. These six items use a five-point Likert format, rather than a forced choice format as proposed by Rotter (1966). Three items (e.g. “When I make plans, I am almost certain that I can make them work”) belong to the internal dimension, and another three (e.g. “Many times I feel that I have little influence over the things that happen to me”) to the external or, in Levenson’s (1974) terms, chance dimension.

Validity and reliability

Lumpkin’s (1985) analysis suggests that the scale’s Chronbach’s alpha coefficient of internal consistency is .68, which compares favourably with the range of .65 to .79 reliability coefficients reported by Rotter (1966).

Scores on this scale were significantly ($p < .001$) correlated with variables measuring perceived risk, life satisfaction, not coping, good health and activity, replicating previously established direction and significance (e.g. life satisfaction correlated with internal locus of control at r of .25). These results imply that the brief scale has predictive validity.

In a later study, Sapp and Harrod (1993) pointed out that reliability coefficients for the internal and external/chance scales of this brief measure was .34 and .40 respectively. Their sample, however, was 137 undergraduate students, whilst Lumpkin (1985) used a national probability sample, gathering 3, 009 responses. Length restrictions meant there was room for only one more short scale, which is why, despite some contraindications, it was decided to include this short measure.

In the current research, the internal consistency of Rotter’s brief locus of control scale was .47 and .33. These values are extremely low and are substantially below the recommended value of .7. This finding confirms the one of Sapp and Harrod (1993) and indicates that the measure used is in need of further investigation. Furthermore, the results associated with this measure should be regarded with caution.

4.9.2.6. Sense of coherence

The Sense of Coherence (SOC) Scale, which operationalises the corresponding construct, is a 29-item questionnaire, which was developed and refined by Antonovsky. Its design was guided by Guttman's facet theory. The items for the original (29 item) scale were included to refer to a wide variety of stimuli or situations, since the basic hypothesis was that a person would maintain equal levels of SOC in different life situations. Thus, Antonovsky specified a number of facets of SOC and identified a number of important elements in each of the facets. The items were developed on the basis of systematic combinations between the elements identified. The scale has excellent psychometric properties, confirmed by studies conducted in 20 countries. To date, this is the main measure used for SOC, with few other alternatives on offer.

However, it was the short-form of the SOC that was chosen for this study (Antonovsky, 1987). This 13 item version includes items measuring each of the three dimensions of SOC. The scale consists of five Comprehensibility items, four Manageability items, and four Meaningfulness items. Each item is presented on a 7-point Likert scale. Five of the items are negatively stated and reversed in scoring, so that a high score always indicates a stronger SOC.

Reliability and validity

Sixteen studies have demonstrated internal consistency of the 13-item scale with scores ranging from .78 to .93 (Antonovsky, 1993). The alpha reliability in this current study was .87. The relatively few test-retest correlations show considerable stability. Thus, for example, test-retest reports for the 13-item scale suggest correlations of .77 over 6 months (Antonovsky, 1993).

The systematic procedure used in scale construction and examination of the final product by many colleagues points to a high level of content, face and consensual validity.

Construct (convergent) validity has also been demonstrated by correlating the scores from the SOC scale with two earlier attempts to develop a sense of coherence measure. Criterion validity of the SOC scale was carefully examined by Antonovsky (1993), who summarised the studies which used measures from four domains: a global orientation to oneself and one's environment; stressors; health, illness and well-being; attitudes and behaviour. The vast majority of correlations fall in the predicted direction and are statistically significant.

The scale has consistently been found to measure a global construct - a dispositional orientation to the world rather than a response to a specific situation (Antonovsky, 1987, 1993). Despite identifying three components, Antonovsky argues that "In light of the facet-theoretical design of the measure, there is no basis for deriving distinguishable subscores for comprehensibility, manageability and meaningfulness" (p. 731). Consistently with Antonovsky's predictions, the factor structure of SOC scale points to the presence of one clear dominant factor.

It can be concluded on the basis of the above discussion that the psychometric properties of the 13-item SOC make it highly suitable for use in the current study.

4.9.3. Ethical considerations

The quantitative study too adhered to the British Psychological Society's Code of Conduct Ethical Principles and Guidelines. Ethical approval was sought and obtained from the Student Research Project Panel. It is enclosed in Appendix 8.

The ethical issues considered included any foreseeable threats to psychological well-being, values or dignity because of taking part in the survey. Such risks were judged as low. Moreover, it was thought that the questionnaire completion could have potential benefits for participants through encouraging them to reflect on their time use. A certain level of deception was present, in that the questionnaire was introduced as time and general life survey without any reference to well-being. However, this

deception was necessary to ensure unbiased responses and was deemed acceptable. Certain other issues, such as informing the participants that they could withdraw from the study at any time were not considered essential, as the students were not under any obligation to return their questionnaires.

The invitation and information letter (see Appendix 5) was mailed to the respondents together with the questionnaire. It explicitly stated that by returning the survey the respondents express their consent to take part in the study. It also explained that the information participants provide would remain confidential, and although the survey data and analysis would enter the public domain, the identities of the contributors would remain anonymous. In all subsequent data handling the participants were identified only by their student number. The researcher herself did not have access to students' names.

4.10. Data analysis and analytical strategies

The data analytic strategy relied on factor, correlational and multiple regression analyses. Research question 1.2 and Hypothesis 1 were examined using *exploratory factor analysis* in order to identify factors contributing to satisfaction with time use. The *reliability* analysis of the factor scales was carried out using Chronbach's alpha. Hypothesis 2 was examined using *multiple regression analysis* with the factors identified acting as predictor (independent) variables and satisfaction with time use as the criterion (dependent) variable. Research questions 1.3, 1.4 and 3.1 were also addressed using factor analysis and regressions analysis.

Research questions 1.5, 2.2 and 2.3 and the Hypotheses 3 and 4 on the relationships between being satisfied with time use and well-being (as well as other variables of interest) required the use of *correlational analysis*.

The results of these analyses will be discussed in chapter 6. Next, the attention of the reader is directed to chapter 5, which summarises the results of Study 1.

CHAPTER 4 SUMMARY:

- The objectives of the first qualitative study were: to explore participants' subjective experience of time use; to identify the factors contributing to satisfaction with time use; to elicit the meaning of well-being to the participants; and to explore the associations between satisfaction with time use, well-being and life goals.
- The first study employed a qualitative design, combining phenomenological and hermeneutical approaches to semi-structured in-depth interviews. A qualitative methodology was chosen because the subject matter necessitated an exploratory approach in the first instance.
- A thematic analysis based on the guidelines of Interpretative Phenomenological Analysis (IPA) was chosen to describe participants' experience of time use and factors contributing to their satisfaction with time use. IPA aims to explore personal experience, accounts and meanings people attribute to phenomena and can be used to great effect to make the implicit explicit. IPA originated within phenomenological and interpretational/hermeneutic traditions.
- 21 participants for the Study 1, half of whom were generally satisfied and half of whom were not satisfied with their time use, were selected using combination or mixed purposeful sampling.
- An interview guide was developed and modified following a pilot study with seven participants. The results of the pilot are consistent with the results of Study 1.
- Both the first and second studies were conducted in accordance with the ethical guidelines of the British Psychological Societies, and were approved by the appropriate Open University committees.
- The first study data was analysed in accordance to the guidelines for conducting IPA. Ten distinct stages of analysis were identified.

- Finally, the matters of reliability and validity addressed by the researcher included: awareness of her own biases, triangulation, checks by another researcher, availability and presentation of evidence, negative case analysis and rival explanations, generativity, generalisability, transferability, intellectual rigor and professional integrity.
- The rationale underlying the second study was to investigate if the factors identified in the previous qualitative study were replicated with a larger sample and to see which ones carried more weight. The second objective was to systematically examine the relationships between the variables of satisfaction with time use, factors contributing to satisfaction with time use, subjective well-being, sense of coherence and locus of control.
- The second study employed a survey and correlational design. The method of data collection chosen was postal self-completion questionnaires.
- A cross-sectional approach to the target population (the Open University students) was adopted. The questionnaires were sent to 400 randomly selected students on all Open University courses and were returned by 173 respondents who completed the survey.
- The postal questionnaire consisted of one researcher-designed questionnaire on satisfaction with time use and four scales, the psychometric properties of which are well-known: Sense of Coherence Scale, Locus of Control Scales, Satisfaction with Life Scale, PANAS Scales. The 70-item researcher-developed questionnaire was modified following a pilot study with 20 participants.
- Data analysis was carried out using exploratory factor, multiple regression and correlational procedures.

CHAPTER 5: RESULTS OF THE FIRST STUDY

5.1. Overview of the results

This chapter will summarise the results obtained from the interview study with the help of IPA. Limitations of space mean that the emphasis will be on the ten dichotomous super-ordinate themes that emerged from the data. These were organised into four overarching categories: Motivation, Organisation, Execution and Evaluation. The section that follows highlights some points concerning the analysis and its presentation.

5.1.1. Introduction

Due to the word limit restrictions there was no space to include a detailed analysis of individual cases in this thesis. However, care has been taken to reflect a balanced use of the statements from different participants. The results chapter contains at least two and in most cases (with the exception of seven interviewees) three narratives from each participant. In four cases, however, up to four accounts from the same contributor were used, because of their richness.

Table 3 summarises some of the attributes of each participant derived from the interviews, including their level of satisfaction with time use, whether they feel in control over their time use, the extent to which they feel their life and life goals are coherent and their level of happiness or life satisfaction (LS). It can be noted from the table that although most participants' responses could be located on either of the two polar ends of time use satisfaction, a number of participants self-reported as being somewhat in-between. A similar pattern can be observed with regard to the other attributes. With respect to some of the themes, a distinct difference could be observed between the accounts of participants who self-reported as largely satisfied with their time use and accounts of those who were less satisfied with their time use.

| | Name | Satisfaction with time use | Feeling in control | Life goals-life coherence | Happiness/ LS |
|-----------|-------------|--|---------------------------|----------------------------------|----------------------|
| 1 | AG | Dissatisfied, very productive | Yes | Incoherence or partial coherence | So-so |
| 2 | AL | Satisfied (cognitively, emotionally not) | Yes | Coherence | Very happy |
| 3 | AM | Satisfied | Yes | Coherence | Very happy |
| 4 | BF | Satisfied | Yes | Coherence | Very happy |
| 5 | DC | Satisfied | Yes | Coherence | Very happy |
| 6 | DF | Dissatisfied | No | No coherence | Not happy |
| 7 | FT | Satisfied | Yes | Coherence | So-so |
| 8 | GM | Dissatisfied | No | No coherence | Not happy |
| 9 | GP | So-so | Yes | Coherence | Quite happy |
| 10 | JA | Satisfied | Yes | Coherence | Very happy |
| 11 | JB | Satisfied | Yes | Coherence | Very happy |
| 12 | JH | So-so | Yes | No coherence | Very happy |
| 13 | JT1 | Satisfied | Yes | Coherence | Very happy |
| 14 | JT2 | Satisfied | Yes | Coherence | Very happy |
| 15 | LB | Dissatisfied | So-so | Coherence | Very happy |
| 16 | PB | Dissatisfied | So-so | No coherence | Not happy |
| 17 | PD | So-so | Yes | Partial coherence | So-so |
| 18 | QJ | So-so | Yes | No coherence | Quite happy |
| 19 | RP | Satisfied | Yes | Coherence | Very happy |
| 20 | RW | Dissatisfied, productive | No | No coherence | Not happy |
| 21 | SR | Satisfied | Yes | Coherence | Quite happy |

Table 3: Study 1 attributes of the sample

The chapter that follows will include some elements of interpretation of the results, in some cases with necessary qualifications. However, contrary to some qualitative research traditions, the main discussion of the findings in this thesis is separated from the reporting of the results, so that the discussion of the qualitative, quantitative studies and literature review can be considered together. It can be found in chapter 7.

5.2. Main results

The iterative process of engagement with the transcripts resulted in the identification of 84 emergent themes (see Tables 4-7). An attempt was then made to group these themes together under super-ordinate themes at a higher level of abstraction and generality. The clustering was performed in a bottom-up fashion. The emergent themes were clustered on the basis of their functional and logical similarity. In the majority of instances, a super-ordinate theme was built around and given the name of one dominant emergent

theme within it. For example, the emergent theme *liking one's activities* forms the core of the super-ordinate theme liking what one does, whilst *prioritisation, making choices* is the basis of the "prioritisation, acceptance of limits". The clustering process was not straightforward, however. For example, the researcher was uncertain about locating the following themes: *blaming others; chaos; frustration; internal conflict; rhythm; duty, work ethics*. Seven emergent themes were omitted from the analysis because they were either not rich in examples or were too case-specific: *clarity; confidence; honesty, authenticity; life history; managing others' time; other people's use of time; occupation*. The clustering culminated in ten super-ordinate themes: life goals and worthwhile activities, liking what one does, balance and variety of activities, prioritisation and acceptance of limits, time management mechanics, responsibility and control, discipline and adaptability, achievement vs. wasting time, reflection/evaluation, time anxiety and perspectives on time. Most of these themes cover the spectrum from positive to negative. Certain other super-ordinate themes, for example, flow and larger perspective and perspectives on time (without time anxiety) were considered, but discarded as they did not attract a sufficient number of verbal statements on their own.

Finally, the ten super-ordinate themes were allocated into four overarching categories: Motivation, Organisation, Execution and Evaluation. It is recognised, however, that this is unlikely to be the only possible categorisation. Other options were considered. For example, influences on/determinants of time use, experiences of time use and consequences of using time well/not well could have also been used. The chosen categorisation appeared to summarise the results best and was determined in part by the researcher's preferences and knowledge of the literature (which is why this stage can be seen to combine both bottom-up and top-down processes).

The next four sections will introduce each of the four overarching categories in turn. The emergent themes that feed into super-ordinate themes will also be listed at the beginning of each major section.

5.2.1. Motivation

The two super-ordinate themes: life goals and worthwhile activities, and liking what one does, were grouped together because they appeared to act as motivational factors in relation to one’s satisfaction with time use. This decision was informed in part by the literature on the different sub-types of motivation (e.g. Ryan & Deci, 2000). The other heading for these two super-ordinate themes was considered but discarded – influences on/determinants of time use.

The table 4 below summarises the super-ordinate and emergent themes that form this category, and here as elsewhere it details the number of statements coded under each of these themes⁴.

| Category | Super-ordinate themes | Emergent themes |
|------------|--|--|
| MOTIVATION | Liking what one does (54) | - liking one's activities (25) - interest and stimulation (8) - looking forward to an activity (2) - compensation for disliked activities (1) - busyness (liking being busy; busyness as normal; busyness as stressful) (18) |
| | Life goals and worthwhile activities (52) | - worthwhile, meaningful activity (23) - meaninglessness, not knowing what one wants (2) - life goals – life congruence (17) - poor life goals – life congruence (9) - internal motivation (1) |

Table 4: Emergent and super-ordinate themes comprising Motivation category

5.2.1.1. Liking what one does

This theme concerns liking one's activities, interest and stimulation, looking forward to something, never being bored, finding some compensation for disliked activities, and also being busy (that besides liking being busy includes finding busyness normal or stressful). Most of these themes appear to have an intrinsic aspect, which was the rationale for grouping them together. A typical example of liking what one does is:

⁴ Although all the emergent themes contributing to each of the super-ordinate themes will be identified in a corresponding table, not all of these will be elaborated in detail, due to the limitations of space. When an emergent theme is mentioned in the text, it will be written in *italics*.

I'm in a fortunate position in that I enjoy what I'm doing. I mean if I was clipping tickets on a railway or digging coal in a mine then I undoubtedly wouldn't feel quite the same about the job as I do now. But I feel that I'm a very fortunate person to be paid for doing exactly what I'd otherwise choose to do (FT, Para 90).

In examining the coding report for the major emergent theme *liking one's activities*, it is interesting to note that every one of the eleven participants satisfied with their time use made at least one statement that was coded under this theme. Only two of the remaining participants commented that they like what they do.

Activities emphasised as particularly likable and enjoyable were those that participants find interesting and stimulating. Whilst it was frequently pointed out that both work and home routines can become mundane, finding or making an activity interesting could provide a buffer to boredom and contribute to time use satisfaction.

Erm ... I went to Scotland, went to the conference in Perth last year. Loads of things like that. I went to Belfast for a meeting. The sort of things that I haven't done for quite a while, meeting different people, and meeting politicians, although that is not always a good thing, but ... erm ... so work has been a little bit interesting, because I haven't done that sort of thing before. But ok, the third time I go to Buckingham Palace 'it is getting boring' ok, it is not quite the same, but I am not at that stage (laughs). So I get a lot of enjoyment from things like that. () And meeting people outside, especially people who are quite bright, does make this work interesting and a good use of time (JB, Para 84)

Over half of participants reported deriving enjoyment from being busy, or that they find busyness normal. Somewhat unexpectedly, being busy appeared to contribute to liking activities one is involved in, regardless of one's level of satisfaction with time use.

But I like to be busy. If I have any time off at all, that I am not really expecting, I get very bored. So (laughs) I like to fill my time (LB, Para 27).

I like being busy, hate being bored. So as long as I have got something to keep me occupied, I am really happy with that (laughs) (JT2, Para 13).

It is possible that *liking being busy* would be an atypical theme for a more general population, and has emerged from the present data because the sample used is more professional and educated than the general adult population.

There is a point, however, beyond which busyness becomes counterproductive. It no longer contributes to enjoyment, but rather to stress. The difference between these two perceptions of busyness can be attributed to feeling either in or out of control.

I think that if you feel you're at risk of dropping any of the spinning plates, then I think that you feel you're not completely in control. Being busy can actually be quite stressful. And I think that not having that chance to relax, sit back and just sort of re-evaluate everything can make things increasingly stressful (PD, Para 42).

5.2.1.2. Life goals and worthwhile activities

This theme is about finding activity(ies) worthwhile and meaningful or, on the other hand, meaningless. It also includes being motivated by one's life goals, internal motivation, as well as the sense of congruence between one's day-to-day activities and their greater life goals or values.

Most participants remarked that they feel satisfied with their time when they spend it on something meaningful, worthwhile or gratifying. These activities could be found across work, leisure, home responsibilities or relationship domains. They are not necessarily externally directed, a meditative spiritual practice has been mentioned by one of the participants as the most meaningful time expenditure in his eyes. Furthermore, these endeavours vary in scope from seemingly localised activities, such as making dinner for the family, to those that can potentially have a large scale effect, such as writing textbooks.

I think my job is creative. I like ideas. I like to write things and achieve things and complete pieces of work. And I guess I like, I mean this is grandiose now, but I like to think I'm making a difference. I mean I write about health care and I'm writing for people who are going to be mental health nurses. And I think I know something about that (AG, Para 62).

The position outlined above can be contrasted with viewing one's activities as meaningless, or simply not knowing one's direction in life. The quote below comes from a very senior police officer, who, perhaps contrary to the common sense perception of his occupation, finds his job meaningless and the results of it non-tangible. He sees himself as part of a system, in which he is a faceless player.

... I mean, say if I won the lottery I wouldn't be doing this job, I would pack it in. And I would probably ... get myself fit, get myself healthy, and then re-engage in work. But my work would probably be challenging, where the outcome of my endeavour would result in some benefit. Because the benefits I accrue in this job are not worth much. I am part of a process. I have these guys out here to do their job properly, and I act as a conjurer for my bosses, and give them a comfort blanket to make sure that when they ask difficult questions about the difficult issues that we have to deal with, they get the right answers. What is the tangible endeavour? If I got dead today, three years from now nobody would know who I was (RW, Para 113).

When asked about the ways in which participants' life correspond with their major life goals, many spoke of a high level of correspondence between the two.

So in order to feel great, to have well-being through time use, for me it is about achieving congruence between what you do on a minute by minute basis, and how that matches up to your longer term or higher goals (AL, Para 70).

For example, when asked about what her life goals are, DC responds:

Erm ... and again it is about enjoying the family, it is about ... you know I look forward to my children growing up, and going to school, and then doing well. I look forward to them getting their jobs, and giving me a bit more free time, looking forward to that. And then the old grandchildren coming along, and having the house filled with people, I look forward to that. And my life goals are really based around the family. You know, I see myself being retired, and having a greenhouse and growing plants, and pottering around the garden, and going off on holidays with my husband and following him around the golf course (laughs) (DC, Para 81).

When prompted to reflect on how her life goals correspond with the way she lives her life, her discourse continues to be around family and home, home for her not being a material feature, but a centre for her own self and a place where the family can come together:

So to me everything is centred here, because ultimately this is where we all come together, and this is my centre. And I think if I have a happy home that is what is most important. It is not even the house, I love the house, but if we couldn't afford this house next week and have to move, I would make it somewhere else (DC, Para 85).

This high level of congruence or correspondence was a consistent feature of satisfied participants' accounts, in addition a number of dissatisfied or slightly dissatisfied participants asserted the same. However, each one of the nine narratives concerning a poor fit between one's life goals or objectives and their actual life activities came from the participants who were either strongly or slightly dissatisfied with their time use. This pattern points towards a potential relationship between life goals – life coherence and one's satisfaction with time use.

... Not a lot, not a lot, not a lot. I am not spending it wise because I am not independent, because I am not spending enough time in the gym, or the swimming pool, or whatever. Because I am not spending a lot of time tickling those little cells in my brain. () My work has to be more challenging. Erm ... more demanding, more creative. My life has to be more creative. I don't think that my life is creative enough, that is my main objection. And to get life more creative I have to learn how to organise my time. And I am talking those things for years (GM, Para 200).

5.2.2. Organisation

Three super-ordinate themes: balance and variety of activities, prioritisation and acceptance of limits and time management mechanics were grouped together under this category (see Table 5). It is largely concerned with the ways we approach our time allocation, how we negotiate it with ourselves and the outside world. Time management mechanics could, perhaps, be allocated into the Execution category, but has been located here because most of its component themes refer to preparatory activities.

| Category | Super-ordinate themes | Emergent themes |
|--------------|---|---|
| ORGANISATION | Balance and variety of activities (150) | <ul style="list-style-type: none">- balance (23)- variety of activities (15)- fullness of life (5)- time with one's partner (3)- internal conflict (33)- not much balance (11)- working long hours (8)- boundaries (flexible boundaries; no boundaries; boundaries; dissatisfied with boundaries; satisfied with boundaries, 25)- time for oneself (time for oneself; no time for oneself) (27) |
| | Prioritisation and acceptance of limits (83) | <ul style="list-style-type: none">- prioritisation, making choices (31)- acceptance of limits (13)- listening to oneself (11)- saying no, assertiveness (10)- realistic estimate (8)- wanting more (6)- lack of assertiveness (4) |
| | Time management mechanics (49) | <ul style="list-style-type: none">- organisation, manageability (8)- planning (7)- little or controlled TV watching (6)- working at home (4)- dealing with things as they come (3)- paper planning (3)- no paper planning (2)- doing things in advance (2)- technology, software (2)- working part-time (2)- trying to be organised (2)- working best under pressure (2)- support (2)- structure (2)- reliance on memory (1)- multitasking (1) |

Table 5: Emergent and super-ordinate themes comprising the Organisation category

5.2.2.1. Balance and variety of activities

The largest super-ordinate theme in the study addresses balance, fullness of life, variety of activities on the one hand, and imbalance, feeling internally torn and squeezing the quantity of activities in at the expense of quality on the other. It also covers spending time with one's partner, and having some time for oneself, because the latter appears to be an important part of a balanced life. The sub-theme of *boundaries* between work and home, work and leisure is also included here. The passage below is a typical example of expression of balance.

I would say what makes it feel satisfying is where I realise that I have had a balance of things, where I've been able to carve out enough time to work on the work that really makes me feel gratified, which is usually writing. But also have gotten some time to be with my family while they're still... before dinnertime, meltdown time, when everybody has a million needs at once. If I can quit work a little bit before that and have some time to play with them before everybody is screaming and needs something, that makes me feel satisfied (BF, Para 36).

The emergent themes of *balance* and *fullness* are found predominantly in the accounts of satisfied participants, whilst their counterpart, *not much balance* – in the narratives of those dissatisfied with their time use. *Variety of activities* (having different forms of leisure, and different types of activities at work) appears more “democratic” as an emergent theme, brought up by most interviewees, regardless of their relationships with time.

Internal conflict, feeling torn between activities and possibilities, can be deduced from the accounts of those who feel out of balance with their time and life. Different levels of internal conflict can be identified – from conflicting values within an individual, to internalised conflicts between one's views and preferences and those of other people (family or wider society). The passage below provides a good example of both levels of conflicts discussed above, evident from strong emotional expressions of opposing viewpoints (“I am quite happy...” vs. “...this isn't a way to live!”) and from contrasting a mother's perspective with her daughter's.

I'm quite happy because I suppose I think I'm doing what I enjoy doing. But there is a part of me that thinks this isn't a way to live! (laughs). I should work less! I mean my daughter, I was going to work at the weekend, she's nearly eight, as I said; she was quite sad that I was going to work,

because you know, I go out at the weekend. She said to me: 'You should get a life'. And I thought: she's only eight! She was sad and angry, I think, because I was going to work.

So at times like that it doesn't feel very good, I think. You know I probably do work too much. But then again I'm at home quite a lot of the week, whereas I guess other mothers who work full time might be out of the home five days. I'm generally home for five days, four days (although half of one of the weekend days would be at the hospital, as I said) (AG, Para 56-57)

The data points towards very different approaches towards negotiating the *boundaries* between work and home/leisure, ranging from having very strict boundaries in place and almost no permeability between different parts of life, through to not having any boundaries at all, allowing all activities to flow smoothly into each other. Compare the following accounts of two busy female academics, both of whom are very satisfied with their time use.

And I never, hardly ever, work at weekends. Sometimes I'll do an hour on Sunday evening just to prepare for Monday, but very rarely. I never work on Saturday. As soon as I get home on Friday, usually until Monday morning, I don't do any work (JT1, Para 29).

I don't have boundaries in my time. I don't separate my time in terms of: this is work, this is my own time, this is my social time, my family time, or whatever. I think people who do that are neurotic and they're abnormal. I have colleagues who say: 'Oh, I can't do that because I have a social life.' I have a social life too. I have a social life every day. I don't just have it at the weekends or in the evenings. () My work is part of my social life, it's part of my extended family. I like my work. I like my colleagues. I like what I do. Even if I don't like it I find ways to make it pleasant. I don't pigeonhole my time. It's one continuous... God has given us day and night, and if today I have to go somewhere which is personal, I do, because I don't feel like: 'Oh God! I have to stay at work.' Because when I'm at home I work (RP, Para 48, 50).

There seemed to be no pattern emerging with regard to a potential relationship between preferences for a particular boundaries system and a level of satisfaction with time use. Both satisfied and less satisfied participants were as likely to favour any of the boundary systems (strict, no boundaries, flexible or half-half). The difference, however, was more evident at the level of acceptance or satisfaction with the boundaries system chosen. Thus, for example, participants who were generally satisfied with their time use were also satisfied with the way they negotiated their boundaries, whilst a reverse pattern could be observed with dissatisfied interviewees.

The last prominent emergent theme concerns having some *time for oneself* on a daily basis. Participants satisfied with their time use reported making some time for themselves regularly, which ranged from meditating, exercising and reading to just

pottering around the house and getting things organised (see the extract below). On the other hand, all narratives relating to not having any time for oneself came from dissatisfied participants.

Erm ... I like to get up before the children get up. Erm ... have a bath every morning, go and have a bath, wash my hair, come downstairs, make myself breakfast, I like to have a proper breakfast. And then I potter around, tidying up, usually put some washing in the washing machine, in the tumble dryer, another load in, get all that organised. Do my little boy's lunchbox, my little 4 year old, lunchbox. Erm ... and then they start getting up. Erm ... and I make Jackie's breakfast, the older two sort themselves out in the morning, I make Jackie's breakfast. I like to make time, in the mornings I like to make a bit of time for myself. I work in an office where you have to look smart every day, so I have to do my hair and make up, and I like to sit and watch the news and have the TV on in the background, read the paper, I like to do some quiet things in the morning (DC, Para 7).

5.2.2.2. Prioritisation and acceptance of limits

This theme is about making choices and includes listening to oneself, being able to realistically estimate the time expenditure, acceptance of one's limits, being able to say no, assertiveness, and being satisfied with enough. The other side of the coin is about lack of assertiveness and wanting more than one already has. Over half of participants contributed narratives to this category, regardless of their level of satisfaction with time use (with the exception of *wanting more* emergent theme, where all six passages came from an interview with GM, a salesman highly dissatisfied with his time and life). It can also be noted that the "negative" side of this super-ordinate theme is quite small, represented by only ten text segments.

An example of *prioritisation* below originates from the interview with AM, a successful head of a PR company in the City.

I constantly look at what needs to be done, and what needs to be done when, and generally always, will do what needs to be done soonest, first. And that's what I do, is prioritise. It's simple. If I've got something to do that has to be done at five past twelve and something that has to be done at twenty past twelve, well I'll do the first task first and the second task second. Nothing has the same deadline ever in life. So, something will have to be done at noon, something may need to be done at ten past noon. But they both don't have to be done at noon. And then there'll be something that needs to be done next week. Now, you'll find some people will take all those three scenarios and worry about them equally. Well, no, I'll worry about noon, then I'll worry about ten past noon and then I'll worry about next week. (AM, Para 72).

If taken at the face value, the passage above can be seen as a perfect example of "cracking it", in terms of achieving mastery over one's time allocation. However, a

deeper level of analysis suggests a certain annoyance implicit in the wording (directed towards those who may find prioritisation difficult). This mastery over time can be contrasted with another passage, reflecting a struggle to achieve a capacity for assertiveness.

Erm ... I sometimes wish I found it easier to say 'no' to people. Not that I want to say 'no' it is just that I say 'yes' and I think that is fine, and then when the time comes it seems to be quite difficult. I would like to have more leisure time. But I don't think that is ever going to happen (laughs)... if I retire may be (laughs) (GP, Para 69).

A factor that appears significant in making choices of how to spend time is *listening to oneself*, which is about awareness of, and taking into account, one's state of mind and preferences when choosing one's priorities at any given moment. Several participants asserted that ignoring your own preferences and frame of mind may lead to low productivity, whilst taking yourself more seriously contributes to both efficiency and well-being.

One of the very informative experiences that I had in my younger days, in terms of time use, was a very good friend of mine told me that the best way to use time was to ask yourself constantly, sort of every minute 'am I making the best use of my time at this point in time?'. And I guess it was that question that has always guided me to prioritise things, in terms of a) deadlines, and b) what is most important to me at this moment in time, in terms of what fits best with my erm ... frame of mind, what would I be most efficient in. And on that basis, and that is not to suggest that deadlines always take priority over frame of mind issues, because I actually think that frame of mind issues are more important (AL, Para 70).

5.2.2.3. Time management mechanics

One of the less prominent super-ordinate themes in this analysis concerns everything that is commonly understood by time management: organisation, manageability, planning, doing things in advance, paper planning (lists, diaries, etc), using technology for organisation of time, arrangements with work, multitasking, support, good memory, etc. It's also about what can be considered less effective time management habits, including dealing with things as they come, and working best to deadlines and under pressure. As can be seen from the Table 5, although this theme encompasses 16 emergent themes in total, none of these are clearly prevalent, judging by the number of coded text segments. The low number of text segments coded under the time

management mechanics theme is quite surprising, considering that a specific question on time management was asked during each interview.

In response to the question as to which time management strategies or tricks they find particularly useful, participants talked about various things that help them organise their time. These ranged from using a tasks manager on Microsoft Office's Outlook and email reminders to more global re-planning of one's life. Thus, for example, for two women with three children each, the key to feeling organised was to start working part-time. Some found working from home more useful than going into the office, because of fewer distractions. Mixed responses were obtained with regard to paper planning. Whilst some participants run up to three diaries, and write anything that crosses their mind on a post-it note, others organise their time without relying on external prompts. Compare these two different approaches to planning below, noting that the first comes from a busy professional slightly dissatisfied with his time use, whilst the second from a fire-fighter with two jobs who feels very satisfied with his time.

I generally make a nice pot of coffee and I sit down then, till about 8.30 (am), doing a combination of things, which is generally just thinking through my day. And I sit down with a pad of paper and a list and a coffee. () I just sort of think through what I've got to do and how I'm going to do it. Just getting my mind into how the day is going to work and how the day is going to be (PD, Para 20).

Oh, you are taking me back to my business degree here (laughs). Time management tricks ... I am not into writing lists or ... planning out a day, like on a diary, some people have got '9am do this, 10am do that, 11am do that' I am not into all that. It is just all in your head, like if you are going out and you have got work to do, the route you take might be the most structured way to do it, or ... I can't think of any tricks of the trade or anything like that, it is just ... just really knowing, feeling about how long something is going to take (JA, Para 112).

A number of responses related to deliberately controlling TV watching, either through simply minimising such an activity or carefully selecting certain programmes and switching TV off at all other times. This organisational strategy was reported as one of the effective ways to free up one's time.

What I don't do, what I do very, very, very little of is watch television. Yes. And I sometimes find myself wondering recently how people find time to watch the television, because I just do not have it (laughs). It is not true to say I don't have the time, but I choose to spend my time differently (SR, Para 20).

5.2.3. Execution

The Execution category is concerned with acting, putting what one has structured and organised into practice. It covers three super-ordinate themes: achievement vs. wasting time, discipline and adaptability, and taking responsibility and feeling in control. As with previous categorisations, the allocation of these three super-ordinate themes into Execution can be potentially questioned. For example, responsibility and control are almost certainly needed whilst putting what is planed into action; nevertheless, these may also be important during the organisation stage.

| Category | Super-ordinate themes | Emergent themes |
|-----------|--|--|
| EXECUTION | Achievement vs. wasting time (109) | <ul style="list-style-type: none">- achievement, completion (61)- efficiency, productivity (10)- doing things well (8)- not liking to waste time (6)- progress (3)- wasting, losing time (16)- slow progress (3)- travelling as a waste of time (2) |
| | Discipline and adaptability (111) | <ul style="list-style-type: none">- adaptability and flexibility (20)- discipline (7)- getting on with it (6)- acting on priorities (7)- synchronisation with environment (synchronicity with others; rhythm; communication; things running smoothly; chaos; frustration; blaming others) (34)- flow and larger perspective (flow; on the top of the mountain; aware of dangers of flow or absorption) (37) |
| | Taking responsibility and feeling in control (99) | <ul style="list-style-type: none">- responsibility (20)- being proactive (9)- duty, work ethics (8)- preventing oneself from feeling over stressed (4)- freedom (3)- reactive, rather than proactive (3)- overload from above (2)- not taking responsibility (2)- control (in control; out of control; fear of losing control) (48) |

Table 6: Emergent and super-ordinate themes comprising the Execution category

5.2.3.1. Achievement versus wasting time

When people talk about time, they almost invariably talk about achievement. This was the primary discourse in response to the question: “What makes you feel really satisfied with the way you spend your time”? It was brought up by every single participant in the study, regardless of their level of satisfaction with time use. This super-ordinate theme encompasses achievement and meeting deadlines, completion, feeling of progress, efficiency, productivity, doing things to the best of one’s ability, not liking to waste time on the one hands and wasting, losing time, slow progress and travelling as a waste of time on the other.

So ... yes, if I have planned my day well and achieved everything, then yes, I feel ... quite satisfied (PB, Para 72).

A feeling of achievement can be related to almost any activity, as long as this activity is planned or valued by the person themselves, thus achievement is fundamentally subjective. For QJ, a retiree who devotes his life to practicing Buddhist meditation, achievement is related to performing a certain number of rituals/techniques on any given day. Moreover, as can be seen from comparing the two extracts below, achievement is perceived as pleasurable by QJ despite not being valued by the worldview to which he is subscribing.

...I feel satisfied if I have done some good practice, or if I have clocked up ... a hundred or a thousand prostrations, in a day, and if it has gone well. So achieving ... achieving what I set out to do, or achieving something worthwhile gives me pleasure (QJ, Para 16, 46).

So there is the Buddhist practice ethic and still breathing down my neck, and of course the spiritual advanced Hindu is to be happy whatever you do, without any kind of grasping of goals. It is the grasping that gives frustration, and the achieving that gives a certain amount of satisfaction, but Buddhists say that is also the cause of all suffering (QJ, Para 66).

Whilst several participants satisfied with their time use indicated that they do not like procrastinating or spending time unconstructively, *wasting time* as a theme was more dominant for those dissatisfied with it. DF, a PhD student in his tenth year of writing the thesis comments:

It's very easy to lose a lot of time just going into the library, looking up things on the internet, looking up references. That can create a huge sense of dissatisfaction in that I'm losing time (DF, Para 10).

Travelling, and especially driving, is sometimes reported as a waste of time. Moreover, it is often characterised by feeling out slightly of control, unable to change the situation.

I was driving down to Cardiff. One of the problems when you are doing time analysis, is really where somebody lives, communication comes into it so much, because I am two and a half hours drive from Cardiff and ... it is five hours there and back in a day, and it does take up a considerable amount of time. There is no train. Whereas erm ... if I come here for example, I can jump on the train, I can do some work on the train, as long as it is not too crowded. Erm, whereas that sort of thing is a complete waste of time when you are driving. There isn't an awful lot you can do about it, but it is a complete waste of time (JB, Para 64).

5.2.3.2. Discipline and adaptability

This theme is about being disciplined, "getting on with it", acting on priorities on the one side, and about adaptability and flexibility on the other (the plans are not set in stone, you have to adjust them according to the needs and demands of environment). Contrary to the preceding themes, these two sides are not opposites. Rather, the theme taps into an optimum balance between following one's plans and doing what is necessary, and modifying those plans depending on the situational or personal demands.

... Well I am trying to be quite disciplined. So with e-mails I am trying to action, if I get an e-mail in I try and action it the same day, or within a couple of days. And if I can do that ... then it helps keep that sense of pressure down (SR, Para 60).

Oh dear, just getting on with it, I suppose, yes (laughs) just getting on with it (JT2, Para 73).

Yet, it may not always be possible to just "get on with it". If one plans to take an underground somewhere and the line is suspended, there is little point in waiting on the platform. Whether one chooses a different mode of transport, or decides to cancel the journey, this would require adaptability and modification of the original intentions. Such adaptability is a necessary part of life, yet the level of openness to change may vary in different individuals. It can be noted from the analysis, for example, that all of the passages coded under *adaptability and flexibility* in this sample come from participants who are either fully or semi-satisfied with their time use, whilst those dissatisfied with time did not contribute any narratives to this emergent theme.

And that will inevitably involve a great deal of flexibility, and a great deal of openness to experience, recognising that now is not the best time to do something, and even though it may delay it, may be the best time to do it would be some time later. And of course that has to be balanced by situational demands. It is no good saying 'I don't feel like setting those exam questions today, I will do them in August' when the exams are in June. So everything is relative (AL, Para 70).

You just have to completely, constantly decide what you're going to do in what priority and be prepared to change. So for instance, if I came in and said: 'I have got to do tasks one, two and three', knowing that tomorrow I was going to do four, five and six, you have to be flexible enough that... actually I'm going to do two, four and five today, leaving one, three and six tomorrow, when I wasn't planning to do it that way (AM, Para 117).

One of the emergent themes in discipline and adaptability concerns *synchronisation with the environment*. What is meant by this is an intuitive feeling of being in the "groove" with people and the circumstances around a person, feeling a sense of rhythm, feeling that things are running smoothly. The passage below comes from the head of a small social enterprise, who attempts to achieve synchronisation with circumstances through planning his own and his employees' time in what he conceives of as stanzas. A stanza in poetry is a unified group of lines or a self-contained rhyme scheme. Creatively applied to business in this particular instance, stanza becomes a meaningfully defined (rather than arbitrarily, as in the case of a working week) period of time devoted to working on a particular project.

Get to the end of the stanza. I will show you what I mean. This is how I organise the company's time behind the scenes, I organise everybody's diary, this is behind the chaos, this is actually the reality. Erm...this cover is ten weeks, stanza can cover any amount of time really, anything from a few weeks to a few months. It is a period of time in which something is going to be achieved and it is a self ... a naturally erm ... a naturally self defining time. Erm ... this one is going to be the run up to (Company Name) celebration I think, it is not confirmed yet. So ... I like picking periods which have significant boundaries to everyone in the company, and making everyone focus on that period of time, and in that period of time I make them pick broad targets which have got to be achieved within this package of time. I see it very much as a package thing. Erm ... and to try and achieve some kind of like quality what we tend to do with these blanks is we get them out and put them around the table, and think of treats, because we know we are going to be working through this every bloody day or whatever. So we deliberately, the first thing we do is like look at the stretch of work in the package, and think of a few treats for us all, like an outing, or go to the seaside, or go away for a few days. And then fill in the work, you know, fill in the blocks. It is very much about erm ... it breaks down into a full on package. Because the way the work gets done, you don't really get anything done in a day, you really can't. It is more like a week, and for me the days in the weeks tend to go seamlessly... So I look at it as broken down into one package, two package, three work packages, etc. ten work packages, weekends may be work, may be not, depends. So that is how we map out our time map. That is the idea (laughs) Do you want a cup of tea? (JH, Para 63).

The final emergent theme is related to *flow and larger perspective*. Describing certain activities, most often work, participants talked of a state of complete emersion or

absorption into a task, when time becomes suspended and they lose awareness of anything else around them. These descriptions characterise an optimal state known as *flow* (Csikszentmihalyi, 1990). Some participants emphasised that being in flow and totally focused on a particular task, helps them to be very productive and achieve a lot in a limited amount of time. However, others pointed out the potential dangers of such a state of absorption, in that it might become difficult to abandon a flow activity, even though it may be necessary or important to do so.

I think if you're so absorbed in something, my personal tendency, it comes back to what I said before, is that I think I could manage my time better; in the sense that I tend to get very involved in something and I will let other things slip in order to make something absolutely right. And I'm not very good at turning around to myself and being disciplined and saying: 'No. I've got to stop this, gotta move on'. And I dare say the person who's better able to do that better able to manage their time in that fashion, or be aware of time would also be better able to manage how they use that time in that fashion (PD, Para 183).

A small number of participants spoke about strategies they use for managing flow, including setting an alarm clock when working on an interesting task (and, importantly, stopping when it rings), or just occasionally prompting oneself to “step out” of the state of absorption to evaluate the situation around. The researcher terms such capacity “on the top of the mountain”, because in such a position one can both be in the present moment, whilst sustaining awareness of the world around (what can be seen from the top). Otherwise, this position can be conceived as one allowing quick alternation between perspectives.

You can still be in flow but you can rise above that and see what is going on around you. But you can still be carrying on, and then come back down again and focus, and whatever. So yes, it is a fluctuating consciousness that will take you in and out of the flow (JT2, Para 173).

5.2.3.3. Taking responsibility and feeling in control

In this prominent theme, the control part includes a dichotomy between feeling in control and out of control/fear of losing control. The responsibility consists of being proactive in relation to time; preventing oneself from feeling over stressed on the one side and guilt, being driven by duty, experiencing pressure from above, being reactive

rather than proactive, and not taking responsibility on the other. A clear pattern transpired in that the satisfied participants were more likely to use responsibility and proactivity discourses. They expressed a belief that no one else is responsible for a person's time other than him/herself as illustrated by this example:

Well, I would say it's a choice... that you can always fill up your day with more and you can always take some things away. Those are all choices. I just... the one thing that I've learned to really have a distaste for, and I used to do this myself, is people who would say: 'Oh, this is a crazy, busy time for me!'. And, you know, just as an excuse for not being able to get together or not being conscientious about something. I realised that it was possible for me to say that every day: 'This is a crazy, busy time for me!' () So I've tried really conscientiously in the last couple of years, especially, since my boys were born, to realise that if I'm up there at crazy-busy every day, then that's my fault (BF, Para 14, 16).

For some of the participants, responsibility meant approaching a difficult situation or a deadline not with the attitude "I can't" but "how can I do it". Asserting responsibility can be contrasted with relinquishing or transferring it onto circumstances. The account below, for example, refers to finding it difficult to assert responsibility over time and "escaping" the decision making through TV viewing.

Tough one, tough one, switching off TV (laughs). Then you have to do something, TV is so easy. It is social for your time, but if it is switched off then you have to use your little brain to figure out what you are going to do (GM, Para 89).

Taking responsibility for one's time was frequently complemented by feeling in control over it. Autonomy and making your own choices at work were emphasised as fundamental for feeling in control. As can be seen from Table 3 most participants who feel in control over their time were also satisfied with it.

I feel in control of my time in principle, because obviously if you are doing something like this where ... you know, you are putting your financial future on the line, and putting a lot into it, you are continually obviously asking yourself 'what on earth am I doing this for?'. And my answer to myself is 'you can stop, you are in control of your life, go and do something else, you want to do that then?' and I think 'well actually I don't want to' there is the trick isn't it, stop asking yourself 'why am I doing this' if you don't really want to stop (laughs). Erm ... so I don't feel trapped... (JH, Para 75).

On the other hand, each of the passages referring to feeling out of control belonged to participants who expressed dissatisfaction with their time use:

If I'm spending my time badly I know it. I get an irritable feeling, like I'm not in charge, that I'm spending time doing something, even though I know I don't really want to do that (DF, Para 50).

5.2.4. Evaluation

Evaluation can be seen as a meta-category, uniting two super-ordinate themes that approach the subject matter from a distance: reflection, evaluation and time anxiety and perspectives on time. Although both super-ordinate themes are quite small, they nevertheless appear to form two distinctly separate meaning units.

| Category | Super-ordinate themes | Emergent themes |
|------------|---|--|
| EVALUATION | Reflection, evaluation (42) | <ul style="list-style-type: none">- satisfaction with time (16)- reflection (5)- dissatisfaction with time use (14)- dissatisfaction with life (4)- no opportunity to reflect (3) |
| | Time anxiety and perspectives on time (65) | <ul style="list-style-type: none">- time anxiety, time running out (21)- time as flight (9)- no fear of time or time anxiety (8)- time as a container (7)- time as slow (4)- time as a matter of perspective (5)- time as real (2)- time as a jewel (2)- time as unlimited (2)- time as a mechanism (2)- time as limiting constraint (1)- time as commodity (1)- time as absolute and finite (1) |

Table 7: Emergent and super-ordinate themes comprising the Evaluation category

5.2.4.1. Reflection, evaluation

This small theme concerns evaluative attitudes. It is about the ability to reflect and satisfaction with one’s time use at the one end of the spectrum, and dissatisfaction with time use, with life and not having an opportunity to reflect at the other. The accounts below arose in response to the question “How satisfied are you with your time use”?

Oh, very satisfied. I’ll fit everything in. I’m very productive, yeah (JT1, Para 53).

I think that it’s probably quite efficient. I feel reasonably happy with it... (FT, Para 18).

Dissatisfaction with one’s time seems to go hand in hand with *dissatisfaction with one’s life*, with certain statements from the same participants being coded with both emergent themes. Thus, for example, a 43 year old casino manager comments:

Erm ... I always seem to be plodding on through life, and I think 'god, surely there must be something else' you know, I must be missing something. Everyone is living a different life, I mean I don't know (laughs), do you know what I mean? (PB, Para 52).

Being able to stop, look around, take a step out, evaluate one's situation and understand the direction in which one's life is going was brought up by a number of participants. Both of the following extracts use metaphors to emphasise the importance of deliberately creating reflective moments for one's time use.

Have you ever seen a hamster on a hamster wheel? It gets faster and faster and faster, and maybe it's because hamsters aren't particularly bright. They don't actually seem to get off, they just carry on going! (laughs). We do exactly the same thing. And it actually... we need somebody to put a little knife in the spokes and stop it, for a second or two. Otherwise you can get... I think it takes a very skilled person to be able to, whilst travelling at that speed, to be able to have reflective moments, which I think are very important. Otherwise you can tend to get very blinkered about moving very rapidly in the wrong direction (PD, Para 191, 195).

GM: You know, I need time to ... because, you know, what do you call those things? With an Eiffel tower inside, with the snow?

Researcher: Oh right, I know, yes.

GM: You need the time to wait for all the snow to settle down so you can see around. Now it is a little bit like running around without ... having the time to stop and to go one step back, and to see around, to look around (GM, Para 21-23).

It is notable that the importance of reflection was brought up mainly by participants not necessarily satisfied with their time. In fact, only one contributor to the eight passages (belonging to *reflection* and *no opportunity to reflect*) was happy with her time use. Further interpretation of this finding will be left to discussion.

5.2.4.2. Time anxiety and perspectives on time

The final theme includes different viewpoints on the nature of time and on the role of time in one's life, time as flight, time as a container, time as absolute and finite, time as real, time as commodity, amongst many others. A distinct sub-theme concerns time as the source of anxiety or a feeling of time running out. Some participants experience time anxiety as they engage in more and more commitments, conscious that they cannot meet all the deadlines. Others become aware of the finiteness of time through the ageing process.

I've just had my 35th birthday, so I think that I need to get a move on in my life. Especially when I see friends having children or becoming more successful in their work. My father told me that when he was a young man a year seemed like a long time, and when he got older he would think in terms of what he was doing in the next ten years. He would think in a unit of ten years. Now I've experienced that too, except I'm very aware of how quickly ten years can go, and how short life is (DF, Para 83)

For another participant, the 59 year old QJ, the feeling of time running out has a somewhat different connotation. Suffering from Parkinson's disease he is aware that his condition will progressively worsen over time. However, there is also a theme of hope in his discourse, related to the possibility of the discovery of a cure for his disease.

... My disease is incurable and progressive, so it gradually gets worse and worse, very slowly, but it is not stationary. So one day I will be in a wheelchair, one day I will ... it doesn't show in my life, but certainly in twenty years time I will be very much worse, shaky like a jelly. So time is very much a constraint there, but also there are cures, and research in the pipeline, which can be delivered one day. So one day they will find a cure for my disease. So I am not going to die, it is not like cancer, not like a heart condition, it is not going to kill me, but it is certainly going to ... so I am in an inexorable sentence of time whittling away my faculties, much more so than in an ordinary person. And there being a possibility of cures, but will they be ready in time? (QJ, Para 66).

Perhaps contrary to the claim that time scarcity is affected by the number of roles one has to manage (Larsson and Sanne, 2005), time anxiety was mainly reported by those with the least number of roles.

A number of interesting descriptions and metaphors of time emerged from the participants' accounts. The most notable of these, *time as flight*, related to days and weeks racing past, is in many respects similar to *time anxiety*, *time running out*, although it does not necessarily betray a feeling of panic. Another significant perspective approaches time as a construct created by people, which depends on what one invests into it. The title of this emergent theme, *time is a container* captures the perception of time as both objectively "empty" but subjectively meaningful.

Time is nothing except what you fill it with and there are... we have the clocks to allow us to have a shared conception about where to be at a particular time, but that's about it. That a watch or a clock just helps to be a conscientious member of society, but it doesn't define time. Like, "you are what you eat", your time is what you fill it with. If you're not filling it with things that you enjoy and you like, then that would be your cue to make some rearrangements. So I would say that time is just an abstraction that comes from whatever activities you've been doing. The activities are the central thing... and the balance of activities, like when you're going to switch from one activity to the next, and then time is just the outline of that (BF, Para 126-127).

5.2.5. Brief summary of the main results

The ten super-ordinate themes reviewed so far in the chapter shed some light on what factors may contribute to satisfaction with time use. Time use satisfaction appears a multidimensional construct, influenced by motivation, how participants organise their time, time execution and evaluation. Table 8 provides a summary of the super-ordinate themes and their overarching categories.

| CATEGORY | SUPER-ORDINATE THEMES |
|--------------|---|
| MOTIVATION | Liking what one does (54) |
| | Life goals and worthwhile activities (52) |
| ORGANISATION | Balance and variety of activities (150) |
| | Prioritisation and acceptance of limits (83) |
| | Time management mechanics (49) |
| EXECUTION | Achievement vs. wasting time (109) |
| | Discipline and adaptability (111) |
| | Taking responsibility and feeling in control (99) |
| EVALUATION | Reflection, evaluation (42) |
| | Time anxiety and perspectives on time (65) |

Table 8: Factors contributing to satisfaction with time use (nos. of occurrences in brackets)

The researcher feels satisfied with the results of clustering the 84 emergent themes into ten super-ordinate themes and also with the logic of four overarching categories. The categories used appear to work well as a means of making sense of the data and grouping the emergent and super-ordinate themes. However, she is aware of the fuzzy boundaries between the super-ordinate themes and between the overarching categories. Certain emergent themes could have been placed elsewhere, for example the emergent theme *life goals – life congruence*, which is currently located under life goals and worthwhile activities, could also be situated within reflection, evaluation.

IPA explicitly acknowledges that it is the researcher who is interpreting the data. The author is conscious that her knowledge, values and preconceptions could have affected the decisions, interpretations and the outcomes of this study. For example, a researcher not familiar with the motivation literature could have structured the categories differently. If the author did not have psychology background, she would be likely to ignore the responses related to *flow and larger perspective*. The fact that she has to balance parenthood with a considerable workload and earning responsibilities, could have affected the way she opted to code the results - for example, by being acutely aware of the importance of the balance theme. She also places a high value on meaning, which could have led to noticing the emergent themes feeding into life goals and worthwhile activities.

The sample used could have also affected the outcomes. For example, its significant proportion consisted of psychologists, which might be the reason why the notion of flow was frequently brought up in the interviews.

Many ideas pursued in the literature review, such as the importance of continuity or congruence between one's life goals and their life as lived or a sense of control over time for time use satisfaction surfaced in the qualitative analysis. The evidence also seems to support a crucial role played by time anxiety in influencing one's satisfaction (or dissatisfaction) with time use. However, the analysis brought up a number of unexpected or less expected findings, such as the importance of subjective balance in time allocation and of asserting personal responsibility over time, the prominence of a sense of achievement and the ability to adapt to changing internal and external circumstances. The themes that emerged from the analysis seem to confirm the researcher's suspicion (originating from the literature review) that the subjective or psychological factors, rather than the more objective factors such as time management mechanics (that produced inconsistent findings) offer the key to understanding what facilitates satisfaction with time use. Section 5.4 will explore how these findings relate

to the research questions posed in the thesis. Further discussion of the implications of these results can be found in chapter 7.

5.3. Additional analyses carried out on the data set

There are many different ways of analysing the data. In addition to identifying the ten dominant themes reported in the chapter so far, the researcher also carried out three additional analyses related to areas covered in the interview schedule and emerging directly from the accounts. Two of these analyses will be briefly elaborated upon here as the most promising and illuminating for the research questions. The first focused on the meaning of well-being for the sample. Another way of approaching the data was to look at the relationships between time use and well-being.

The final analysis explored what life goals and values were brought up as important by the participants. This data was gathered in response to the interview question “What are your major goals, what is it that really matters to you in life”?, which served as a stepping stone to exploring participants’ life goals – life congruence. Although the analysis of the content of participants’ life goals produced informative findings, it contributed little to the research questions. In fact, consistently with the conclusions reached in the literature review, the results indicated that the particular type of goal one is pursuing seems to matter less for well-being than one’s life goals - life congruence (considered in section 5.2.1.2). Therefore and in light of the thesis word limit, this analysis was not included in the thesis.

5.3.1. Meaning of well-being

The answer to the question “What does it mean for you to be happy, or to have a sense of well-being”? gave rise to 19 emergent themes. These were allocated into five super-ordinate themes (see Table 9).

| Super-ordinate themes | Emergent themes |
|------------------------------------|--|
| State of body and mind (12) | <ul style="list-style-type: none"> - balance, harmony and completeness (5) - absence of the negative (2) - evaluation (2) - feeling good about oneself (2) - health (1) - chemical (1) |
| Situation-related (27) | <ul style="list-style-type: none"> - appreciation of what one has (18) - interest (4) - pleasures (3) - money (1) |
| Self-actualisation (13) | <ul style="list-style-type: none"> - work (5) - achievement (3) - choice, freedom (4) - self-actualisation (1) |
| Relationships (16) | <ul style="list-style-type: none"> - family and loved ones (12) - belonging (2) - morality (1) - home (1) |
| Transcendence (4) | <ul style="list-style-type: none"> - benefiting others (4) |

Table 9: Emergent and super-ordinate themes related to the meaning of well-being

5.3.1.1. State of body and mind

The first super-ordinate theme relates to internal states (psychological or physiological) mentioned as a cause/essence of well-being. Five participants defined happiness as a state of balance, harmony and completeness. Two viewed happiness as the other side of being in a negative state (e.g. neurosis, see the example below), whilst some theorised about the difference between being happy and unhappy (evaluation). Feeling good about oneself was also offered as a definition. Health can be categorised as an internal physiological state one aims to achieve, although this theme was not dominant. Seeing happiness as something “chemical” (i.e. influenced by genes) can be viewed as another reference to a physiological internal state.

I think others must be much happier if they are free from neurosis. I would see that as the overwhelmingly dominant thing that holds me back... it's the only thing that holds me back. I've got everything else that I could possibly dream of in life, and more. My wildest expectations and more have been fulfilled. But that is the thing that stops me being happy. The only thing that stops me being happy (FT, Para 114).

This statement is a good illustration of defining happiness in terms of one's own internal state. FT is fully satisfied with his life circumstances, but this is not sufficient to feel happy. He suffers from obsessive-compulsive disorder and finds it hard to achieve peace of mind. Yet, it is precisely this peace of mind (or freedom from neurosis) that he equates with well-being.

It's important to have a balance. But then how do you define a balance? My balance and your balance would be different, wouldn't they? But I think really happiness comes when you don't have a big gap between what you want to be and what you are... (RP, Para 116).

RP believes that well-being can be seen as a balance. Yet this sense of balance is subjective, and she is aware of it. Interestingly, the gap she is referring to is between what you want to be and what you are, not between what you want to have and what you have, which would belong to the next super-ordinate theme.

5.3.1.2. Situation-related

This theme evaluates well-being with regard to one's circumstances, with attaining something outside a person him/herself, with achieving or having things and experiences that can be considered a part of someone's life situation. In this respect, it represents a reactive, rather than pro-active approach to well-being. The dominant emergent theme here relates to appreciating, being satisfied with what one already has.

Erm ... good question (laughs). Erm ... I am not really sure, to be satisfied I suppose with what I have got in life. And I am. Even if something disastrous happens (laughs) I can usually get through it, and it doesn't bother me much really (LB, Para 83).

I'm not in poverty, I'm not in ill-health - I'm in pretty good health for a 60 year old. I'm not rich, but neither am I poor. I've got fairly good security of tenure. I've got a happy family environment. I've got the IP [step-son.]. I've got the dog (FT, Para 116).

Both money and pleasures (mainly travelling, listening to music, enjoying nature) are also present as emergent themes, although these are less prominent in comparison with appreciating what one has.

Money is a bit of happiness as well isn't it? Yes, it is the root of all evil, but ... if you haven't got any you are a bit down in the dumps (JA, Para 128).

Even though the above assertion equates money with happiness, it is done with caution. The interviewee is aware of the common-sense discourse that money does not buy happiness, but believes that money is important nevertheless.

5.3.1.3. Self actualisation

The term self-actualisation is used here to imply fulfilling one's potential and an active shaping of one's life through work, ambitions, completion of what one has started and a desire to move forward in the right direction.

Erm ... for me happiness is about feeling that (sighs) for me, I am moving in the right direction in life, and I am achieving my potential. () And I think that if I ever had a situation where I feel my time or potential, or effort, or ability is being wasted that lends itself very much to very quick boredom, and very quick erm ... sort of withdrawal from the task, and then desire to refocus on erm ... refocus on something that would be more fulfilling and more achieving of the potential. (AL, Para 50).

In addition to that, participants spoke of well-being as achievement and also choice and freedom, all of which can be argued to form a part of self-actualising tendency.

Achieving makes me happy. I like to achieve, I don't like being defeated by anything. I'm a fighter. As long as I'm on top of things, and I like to be on top of things all the time, that makes me happy (RP, Para 92).

Unlike the previous theme, this super-ordinate theme reflects a proactive attitude towards life. Well-being is what one can do, rather than being satisfied with what already is.

5.3.1.4. Relationships

Relationships is the second largest super-ordinate theme in well-being accounts. It includes the emergent themes of belonging or being a part of something, morality and a happy home. The dominant emergent theme is that of *relationships with family and close friends*. In this theme participants spoke about getting married or staying

connected with a spouse, enjoying and deepening relationships with children, siblings and friends, having a happy family life and finding more time for relationships.

It's something quite emotional, which is to do with being accepted and being part of something (DF, Para 68).

A sense of wellbeing? Getting the love of your loved one is always good, it is nice going home to a smiling face, and a hug and a kiss and that (JA, Para 128).

Note the similarity between DC's accounts of her life goals (section 5.2.1.2.) and what well-being means to her (below). Both her life goals and well-being are family and home based. In fact, the two appear intertwined, it is not clear where the home ends and relationships begin and vice versa. Home in DC's story takes a non-material part. Even though she talks about redecorating and financially investing in it, the material side is clearly secondary. In effect, she is representing the home as a sacred space that facilitates the relationships.

Sense of well-being, the thing that means most to me is my family. Always has been, to be honest. I was married before and a bit of a acrimonious marriage break up. A lot of problems with my ex-husband which now seem to be resolved, over various things. Erm ... and Steve and I bought this house together, the house we lived in before was my previous husband's, and we sold this, and we bought this together. And we enjoy making it into a home, we have done a lot of work on it, and I really love doing it, and there is a lot more work to do. And I enjoy planning, you know I get all the books, all the house beautiful books, and I am pulling pictures out and saying 'oh I want to do'. I can't afford to do any of it yet, but I look forward to it. So I look forward to ... my home and my family life are what is most important. Having all my family around me and knowing that when my dining room and kitchen is done having friends and family round for a meal, socialising. But based around my home. I just love all this. And in the summer being out in the garden, I can't wait to go out there, I love gardening, growing plants and all that sort of thing. I can't wait to do all that. So it is very much a home based thing. My husband worries about ... affording a holiday and wanting to take the children abroad. It doesn't worry me, because I feel we have had holidays in the past, we have done all of that sort of stuff. But I feel that if we don't go on holiday this year, as long as we have got a happy home, and enough food on the table and we have lots of fun, and we get together, and have family and friends round, that is what really matters. My happiness is based very, very much on the relationship with my husband and my family (DC, Para 63).

5.3.1.5. Transcendence

This theme emerged from a few accounts, the focus of which was outside of the interviewee him/herself (which does not necessarily exclude being focused on oneself as well). If in relationships the focus is still on the person him/herself, transcendence is concerned with going beyond oneself – doing something for others on a smaller or larger scale, making a difference, benefiting others in some respect.

I think when you get your sense of well-being from helping other people I tend to feel that it is very, very important (GP, Para 85).

In fact, helping others and looking after people can be done on any scale, even a minute one, even through advice over the phone.

Ah yes, of course I forgot, the main thing that gives pleasure is to be able to serve and give pleasure to other people. If I can help, I can't do very much, but if I can help, benefit ... a friend of mine said her phone didn't work and it was making a rude racket, and it needed replacing. The loud speaker was stuck on, and because I know about electronic things I said 'have you tried taking the battery out?' and she text me back, saying she had been to three shops and four experts and none of them could do it, and it worked. And that gave me double pleasure, 1) because I had benefited her, and 2) because I was clever (laughs) (QJ, Para 46).

It is important to highlight the fact that transcendence is a very small super-ordinate theme, incorporating only one emergent theme and 4 passages.

5.3.1.6. Brief summary

The results described above offer a different representation from what researchers usually understand under subjective well-being. Whilst the discourse of satisfaction is clearly present in the situation-related theme, there were almost no references to affect apart from the two passages relating to negative affect. These findings will be discussed further in chapter 7, in the light of other qualitative studies on well-being.

Although the analysis of the content of life goals is not presented in this chapter, there was a substantial overlap between categorisations of well-being and life goals, possibly because responses to both questions were underpinned by the sense of what is important to an individual participant, or because the interviewees in this sample may have associated well-being with the attainment of their goals.

The researcher realises that it is possible that the categories of well-being identified above reflect her own preconceptions rather than purely falling from the data. For example, the researcher may have been influenced by her knowledge of the differences between hedonic and eudaimonic paradigms of well-being and looked carefully for the passages related to growth or meaning in the data.

5.3.2. Relationship between time use and well-being

All responses to the question “How does the way you use your time relate to your general sense of well-being or happiness, if at all”? indicated the presence of a relationship between time use and well-being. These responses were categorised into three super-ordinate themes: relationship expressed in positive terms (10), relationship expressed in negative terms (6) and time use as the means (13). The three sub-sections below will briefly review and illustrate these themes.

5.3.2.1. The time use and well-being relationship expressed in positive terms

Ten participants believed that the way they use time has a positive bearing on their sense of well-being, i.e. if one is using time well, then one is happier. In some cases this was expressed more like a correlation, whilst in others – in terms of a causal relationship.

Ok, erm ... if I think that I am using my time productively, or I am happy to waste time, you know because you need to rest, erm ... then ... perhaps, it just contributes to my well-being (LB, Para 95).

One of the participants, AL, who is a psychologist himself, made a particularly notable contribution, in which he expressed that for him the relationship between time use and well-being is mediated by self-actualisation.

Erm ... in a statistical sense I ... guess that ... for me personally that the time use and well-being relationship is mediated by ... the extent to which that I feel I am being actualised. So what I mean by that is that if I am satisfied with my use of my time, that would be a proxy for me feeling that I was moving in a direction which was fulfilling and actualising, and that would lead to a sense of well-being. And the contrary would be true if I wasn't using my time in such a way that it would lead me to feel that I wasn't making the best use of my time, that I wasn't actualising, and that would very much undermine any sense of well-being that I had. (AL, Para 54).

5.3.2.2. The time use and well-being relationship expressed in negative terms

Six of the participants who were dissatisfied with their time expressed the relationship between time use and well-being in negative terms, i.e. not using time well is associated with not having a sense of well-being, or simply feeling unhappy.

I think it is quite closely related. Erm ... perhaps if I can put it in a negative way, so if I wasn't using my time well, I wouldn't be having a good sense of wellbeing. It is easier for me to see it that way around. You know, so some of the times that I have actually been most unhappy ... I mean, one time in my life was when I was unemployed and I wasn't working, and I don't know if you know that kind of graph of stress against performance, which is basically saying you actually need a certain amount of, if not stress, but demands made on you for you to be efficient. () So I think there is actually a strong relationship for me between my sense of well-being and how I use my time (SR, Para 100).

5.3.2.3. Time as the means to an end

This theme incorporates accounts in which time is viewed as means for getting something deemed as desirable or important (balance, exercise, finishing a project, relaxation, relationships).

Erm ... I think by being organised with time it means that I get the time to do the things like spending time with my friends, going to the theatre, erm go out for the day. If I didn't manage my time I would have less time to do those things (GP, Para 101).

In the next paragraph time is seen as a tool used to ensure balance.

I think time choices end up being the means through which you get your balance or not. And if you are not proactive with how you make time choices then that just means you're not proactive about balancing the different components of your life in a close-hand way. I want balance within the day every day, and not: 'Oh I've been working really hard and now I need to go on vacation to recoup'. You know, I want that sense of work and recoup and connect to be in every day. And the only way you can do that is to be very mindful of time (BF, Para 88).

5.3.2.4. Brief summary

The above seem to indicate that feeling satisfied or not satisfied with one's time use has a relationship with one's subjective well-being. As it is not possible to draw far reaching conclusions from this small-scale analysis, these findings will be put to the test in the next study.

5.4. Analysis and relevance of the qualitative results to the research questions

This section will be used to summarise the above findings and to highlight the links between them and the original research questions.

Most of the discussion so far has been centred on the concept of satisfaction with time use. More specifically, however, the ten super-ordinate themes identified as important for one's satisfaction with time use (see table 8), address the research question 1.2. "What factors contribute to satisfaction with time use"? The categories of Motivation, Organisation, Execution and Evaluation suggest an overarching framework for understanding the construct of satisfaction with time use.

The themes considered above also concern a number of other research questions specified in Chapter 3. In particular, section 5.2.1.2 deals with the super-ordinate theme entitled life goals and worthwhile activities. One of the notable emergent themes feeding into it, *life goals – life congruence*, is directly related to research question 3.1, "Does the sense of congruence between life goals/values and the way people lead life relate to their satisfaction with time use"? This pattern points towards a potential relationship between life goals – life coherence and one's satisfaction with their time use.

Research question 1.4. "How important are time management skills for being satisfied with time use?" can be found to relate to the super-ordinate theme time management mechanics, discussed in the section 5.2.2.3. The results indicate that the technicalities of time organisation may not be essential for time use satisfaction, as participants who are satisfied with their time use were found to differ significantly on their use of time management techniques. Organisation, planning and little (or controlled) TV watching were the most cited time management skills. Working from home and part-time were the strategies mentioned most by employed women with children.

The taking responsibility and feeling in control theme, discussed in the section 5.1.3.3, loosely relate to research question no 1.5 "What is the relationship between time use and feeling in control"? Sense of control seems to play a significant role in one's

satisfaction with time use. It is not clear, however, whether the feeling of control over time mentioned by participants can be equated with the construct of locus of control.

The final super-ordinate theme time anxiety and perspectives on time, addressed in section 5.4.2 can be linked to the research questions no 1.1 and 1.3, “What is the participants’ experience of their time use”? and “How do participants relate to the experience of time pressure or time anxiety”? Participants’ experience of their time use was expressed through several descriptions and metaphors, most noteworthy of which were *time as flight*, *time as a container*, *time as a matter of perspective*, etc. A number of interviewees expressed feelings of time anxiety, which were generally related to their lack of satisfaction with time use.

Finally, the results presented in section 5.3.2 shed some light on research questions 2.2 and 2.3 “Is there a relationship between satisfaction with time use and well-being”? and “What is the relationship between satisfaction with time use and well-being”? The responses of all 21 participants indicated a strong possibility that satisfaction with time use and well-being are two related constructs. Three super-ordinate themes were identified, suggesting a positive correlation between these constructs.

The qualitative and small-scale nature of this study, however, limits the generalisations that can be made from these findings. Are these findings sample-specific, or can the themes arising from the data be seen as applicable to other people and situations? The second study was carried out in order to assess whether the key study 1 findings (specifically the ten super-ordinate themes) can be replicated with a larger sample and to examine relationships between the variables of satisfaction with time use, subjective well-being, sense of coherence and locus of control. Chapter 6 presents the results of the follow-up survey study.

Two clusters of findings from the qualitative study were not taken to the next stage of research. The one concerning the perspectives on time described by the

participants (with the exception of time anxiety). These perspectives added richness and depth to the participants' accounts but were varied and did not appear to relate strongly to satisfaction with time use. Furthermore, quantitative methodology was not deemed to be appropriate for studying such descriptions and metaphorical representations. Finally, the analysis of the meaning of well-being feeding into the corresponding research question 2.1 "What meaning do participants assign to the notion of well-being/happiness"? was not explored in the subsequent study, as it was always intended to investigate this question only using qualitative methodology. The findings from this analysis, which largely do not correspond with the mainstream approaches to well-being, will be expanded upon in Chapter 7.

CHAPTER 5 SUMMARY:

- Following the primary analysis 84 emergent themes were grouped into ten super-ordinate themes, which were then organised into four overarching categories: Motivation, Organisation, Execution and Evaluation.
- The motivation category encompasses two super-ordinate themes, life goals and worthwhile activities and liking what one does.
- The category of organisation encompasses three super-ordinate themes: balance and variety of activities, prioritisation and acceptance of limits and time management mechanics.
- The execution category includes three themes: achievement vs. wasting time, discipline and adaptability, and taking responsibility and feeling in control.
- Finally, the evaluation category unites two super-ordinate themes that approach the subject matter from a distance: reflection/evaluation and time anxiety/perspectives on time.
- The qualitative analysis confirmed the importance of life goals-life congruence, sense of control over time and of time anxiety for time use satisfaction. The less

expected findings included the importance of subjective balance in time allocation, asserting personal responsibility over time, sense of achievement and being able to adapt to changing internal and external circumstances.

- Two additional analyses were reported. The first of these concerned the meaning of well-being for participants, and the second explored a relationship between use of time and well-being.
- The meaning of well-being was expressed in five super-ordinate themes: state of body and mind, situation-related, self-actualisation, relationships and transcendence.
- The second additional analysis suggested the presence of a relationship between use of time and well-being. Three emergent themes were identified in this respect: relationship expressed in positive terms, relationship expressed in negative terms, and time use as a means to well-being.
- The results of the primary and secondary analyses have informed the original research questions. However, in order to achieve a greater generalisation, a follow-up quantitative study was deemed necessary.

CHAPTER 6: RESULTS OF THE SECOND STUDY

6.1. Research hypotheses and overview of the results

The present study builds on the results of the previous qualitative one, which identified ten themes contributing to satisfaction with time use. These themes were organised into four categories of Motivation, Organisation, Execution and Evaluation. Congruence between life goals and the way life is led appeared to play an important role in subjective satisfaction with time use, whilst using time management techniques appeared to be less essential. Furthermore, the data pointed towards the presence of a relationship between satisfaction with time use and well-being. However, despite the prominence of these findings in the first study, the small and specialist nature of the sample prevents the researcher from making any wider generalisations. The rationale for the quantitative study was to test some of these findings in a more rigorous way. Thus it aimed to assess if some of the main themes/factors identified in the previous study would be replicated with a larger sample and to see which ones carry more weight. The second objective was to look at the relationships between the variables of satisfaction with time use, factors contributing to satisfaction with time use, subjective well-being, sense of coherence and locus of control. The quantitative study aimed to address the following of the original research questions (see chapter 2 for the full list):

1. Time use satisfaction

1.2. What factors contribute to satisfaction with time use?

The first study identified ten super-ordinate themes that were expected to contribute to satisfaction with time use when tested in a larger sample: life goals and worthwhile activities, liking what one does, balance and variety of activities, prioritisation and acceptance of limits, time management mechanics, responsibility

and control, discipline and adaptability, achievement vs. wasting time, reflection/evaluation and time anxiety.

1.3. How do participants relate to the experience of time pressure or time anxiety?

Time pressure or time anxiety (or the inverse) was identified as one of the factors contributing to satisfaction with time use and as such will be considered as part of research question 1.2. It is expected that it will be identified as a distinct factor in the second study.

1.4. How important are time management skills for being satisfied with time use?

Time management has also been identified as one of the factors contributing to satisfaction with time use and as such will be considered as part of research question 1.2. However, on the basis of the qualitative analysis it is not expected that it will be identified as a distinct factor in the second study.

1.5. What is the relationship between satisfaction with time use and feeling in control?

2. Well-being and the relationship between satisfaction with time use and well-being

2.2. Is there a relationship between satisfaction with time use and well-being?

2.3. What is the relationship between satisfaction with time use and well-being?

3. Life goals/values – life congruence

3.1. Does the sense of congruence between life goals/values and the way people lead life relate to their satisfaction with time use?

Congruence between life goals/values and the way people lead life was identified as one of the factors contributing to satisfaction with time use and as such will be considered as part of research question 1.2. It is expected that it will be identified as a distinct factor in the second study.

This led to four main hypotheses, as follows:

Hypothesis 1: A substantial number of the factors identified as contributing to satisfaction with time use by the first study, including life goals and worthwhile activities, liking what one does, balance and variety of activities, prioritisation and acceptance of limits, time management mechanics, responsibility and control, discipline and adaptability, achievement vs. wasting time, reflection/evaluation and time anxiety, will be replicated with a larger sample.

Hypothesis 2: The replicated factors will explain a substantial proportion of the variance in satisfaction with time use.

Hypothesis 3: Satisfaction with time use, as measured through a composite score of factors contributing to it and as measured through a single-item scale, will be positively associated with internal locus of control and negatively associated with external locus of control.

Hypothesis 4: Satisfaction with time use, as measured through a composite score of factors contributing to it and as measured through a single-item scale, will be associated with sense of well-being, as measured by life satisfaction, positive and negative affect, and sense of coherence.

The subjective experience of time use was explored in the first study through the analysis of descriptions and metaphors used by the participants. Similarly, the meaning of well-being to participants was studied using IPA. However, the research questions 1.1 and 2.1 were not addressed in the second study for reasons elaborated upon in section 5.4.

As explained in more detail in chapter 4, the second study employed a survey design using postal questionnaires (consisting of five scales), which were sent to 400 randomly selected students on all Open University courses. The analysis was based on 173 returned surveys. The statistical procedures used included factor, multiple regression and correlational analyses. A reliability analysis has also been performed on several scales. The analyses were carried out using SPSS software. Although 300 participants would be considered a better sample size for factor analyses, it was not possible as the sample size was restricted by the Open University Student Research Panel (see section 4.8.1). However, the achieved sample size of 173 is substantially more than the 100, commonly classified as poor in factorial research (Comrey & Lee, 1992).

6.2. The factor models

68 items concerning various aspects of satisfaction with time use and incorporated in the first questionnaire were explored via factor analysis.

6.2.1. An initial factor analysis

Hypothesis 1: A substantial number of the factors identified as contributing to satisfaction with time use by the first study, including life goals and worthwhile activities, liking what one does, balance and variety of activities, prioritisation and acceptance of limits, time management mechanics, responsibility and control, discipline and adaptability, achievement vs. wasting time, reflection/evaluation and time anxiety, will be replicated with a larger sample.

To test the above hypothesis, the first step was to carry out an exploratory factor analysis of the first questionnaire (satisfaction with time use), excluding questions 15 and 26 which directly measured satisfaction with time use. A principle component

analysis of the 68 items produced 19 unrotated factors with eigenvalues greater than 1.0, and these explained 70.7% of variance. However, since the criterion of eigenvalues greater than 1.0 may over-factorise the correlation matrix (Vitterso et al, 2003), an attempt was made to reduce the number of factors to the most meaningful, achieving a number that is easier to handle but that still explains a significant proportion of variance. Examination of the scree plot suggested that the first 11 factors carried most weight, accounting for 56.5% of the variance in total (table 10), and for at least 3.2% by each factor after rotation. By contrast, the 12th factor explained less than 2.4% of variance after rotation and was difficult to interpret. The factor analysis and rotation were then repeated, capping the number of extracted factors at 11 in order to obtain a clearer factor structure. The majority of the factors appeared meaningful and easily interpretable. They are briefly described below, with their reliability indicated.

| Component | Rotation Sums of Squared Loadings | | |
|-----------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % |
| 1 | 6.110 | 8.985 | 8.985 |
| 2 | 5.440 | 8.001 | 16.986 |
| 3 | 4.305 | 6.331 | 23.317 |
| 4 | 4.079 | 5.998 | 29.315 |
| 5 | 3.449 | 5.072 | 34.387 |
| 6 | 2.985 | 4.389 | 38.776 |
| 7 | 2.973 | 4.372 | 43.148 |
| 8 | 2.513 | 3.696 | 46.844 |
| 9 | 2.194 | 3.227 | 50.071 |
| 10 | 2.194 | 3.227 | 53.297 |
| 11 | 2.170 | 3.191 | 56.489 |

Extraction Method: Principal Component Analysis.

Table 10: Satisfaction with Time Use 11-factor solution: Total variance explained

The first factor explains 8.9% of variance after rotation. It can be named *Liking one's activities and perceiving these as worthwhile*. It also includes the sense of life-life goals coherence, and making progress. The coefficient alpha for these 10 items is .86. It was comprised by the following items:

- 54. I like what I do
- 55. I live my life in accordance with my goals

- 57(-) I often feel that what I do is meaningless
- 61. If I should die today, I would feel that my life has been worthwhile
- 62. I feel I am making progress
- 64(-) I don't have a good sense of what it is I'm trying to accomplish in life
- 66. I feel in harmony with myself
- 67(-) My daily activities often seem trivial and unimportant to me
- 69(-) I am not happy with my progress
- 70. Looking at a typical day in my life, I think that most things I do have some purpose

The second factor represents *Balance* and consists of 8 items. It explains 8% of variance after rotation and has an alpha coefficient of .85.

- 31(-) I work too much
- 33. I take some time for myself on a daily basis
- 38. I have a balance between what I want to do and what I have to do
- 40. I feel that different areas of my life are well-balanced
- 48. I am comfortable with the work-life boundaries in my life
- 49. I feel I have a balance of activities in my life
- 50(-) I never have time for myself
- 68(-) I have to work longer hours in order to meet deadlines

The third factor, *Responsibility and achievement* accounts for 6.3% of variance after rotation and has reliability of .78. It is comprised of 7 items.

- 3. I am careful not to waste my time
- 4. I often check if I am making the best use of my time
- 9. I take responsibility for my time
- 20(-) I am inclined to take life as it comes without much planning
- 22(-) I waste a lot of time
- 52. I usually achieve something within each day
- 58(-) Days often go by without me having done a thing

The next factor explains 6% of variance, and has an alpha of .83. It contains 8 items representing *Organisation and control*.

- 5 (-) I have trouble organising things that I have to do
- 10. I find it easy to organise my time
- 16. I usually feel in control of my time
- 17 (-) My time doesn't seem to belong to me
- 18. I am quite good at managing the many responsibilities of my daily life
- 19. I tend to do things in advance
- 25 (-) I find it hard to maintain discipline
- 47. I am usually accurate in figuring out how long it will take to finish a task

Six *Time anxiety* items define the fifth factor and contribute 5% of the explained variance. The coefficient alpha associated with these scores is .75.

- 6. I often don't have enough time to accomplish my tasks
- 14 (-) I rarely worry about time
- 21. I feel overwhelmed by my responsibilities
- 23. I am often anxious about time
- 53. I often find myself in conflict
- 59. I often feel guilty about not having done something

The sixth factor, *Prioritisation*, consists of 4 items and accounts for 4.4% of variance after rotation. It has, however, a lower alpha coefficient of .59.

- 29(-) I find it hard to distinguish what is important and what is not
- 36. I always know what my priorities are
- 39(-) I am often unrealistic about what can or cannot be done within a particular time period
- 43. I tend to do the most important things first

The seventh factor, which also accounts for 4.4% of variance, is more difficult to explain and it does not directly correspond to any of the qualitative themes. It can be called *Active Planning*. Its reliability coefficient is also relatively low at .57

- 1. I plan my activities from day to day
- 8. I work better under pressure
- 12. Time is what you make of it
- 32. I enjoy being busy

The next factor is more meaningful for the purposes of interpretation. It can be entitled *Inflexibility*. It explains 3.7% of variance after rotation, but has a lower alpha of .59

- 27(-) There is a lot of variety in my life
- 42. I find it difficult to switch from one activity to another
- 51. When I get really engaged in an activity, I forget anything and everything
- 56. I really wish there was more variety in my life

Both factor 9 and factor 11 account for 3.2% of variance after rotation. The first concerns *Time Management Techniques* (7. I use various techniques (e.g. lists, diaries, ticks) to help me manage my time; 24(-) I never write any "to do" lists), while the second relates to *Fixed boundaries* (30. I have strict boundaries between different areas

of life (e.g. leisure-work, etc); 37. I don't separate my work and home life). Both factors have an adequate level of alpha coefficient at .76 and .74 respectively.

Finally, the tenth factor relates generally to *Perceived loss of control* and/or, perhaps, to feeling incompetent, although it is not straightforward to interpret. It also contributes 3.2% of explained variance but has the lowest level of reliability at .53

35. I feel lost when something unpredictable happens

44. My life is chaotic

60 (-) At this time, I am meeting the goals that I have set for myself

65 (-) I tend to do things to the best of my ability

Reliability analysis of the scales showed that factors 1, 2, 3, 4, 5, 9 and 11 have high or acceptable levels of alpha values. Factors 6, 7, 8 and 10 have lower levels of reliability with alpha levels below .7, which is generally not acceptable. Furthermore, a number of extracted factors (9 and 11) consist of only two variables each. Although these variables have high factor loadings (above 0.7), their number is insufficient to claim a reliable factor solution for these cases (Guadagnoli and Velicer, 1988). Two of the eleven factors were difficult to interpret. Overall, the eleven factor solution was deemed unsatisfactory as it presented significant problems from the sixth factor onwards. A further analysis was considered necessary in order to decide which factors are more meaningful and discard those too trivial to take into account.

6.2.2. The final factor solution

The correlation matrix was carefully examined to identify variables that were an impediment to the analysis. The variables were checked for inter-correlations and low communalities. 22 items with the lowest communalities less than .3 were removed (Field, 2000); therefore, together with the two items measuring satisfaction with time use directly, 24 items were omitted from the analysis of the first questionnaire.

The principle component analysis of the remaining items with Varimax rotation produced ten factors with eigenvalues greater than 1.0 (Kaiser, 1974). Four of these

were retained following the examination of the scree plot, which showed a clear cut off point at the inflexion of the curve (Cattell, 1966)⁵. Figure 3 contains the scree plot, which clearly indicates four main factors. The percentage of variance explained by the factors supports the retention of four factors. The first three factors explain 25.4, 8.7 and 7.3 % of the variance. The fourth factor explains 4.8% of the variance, with the next one explaining only 3.2%, closely followed by the six factor contributing 3.1%.

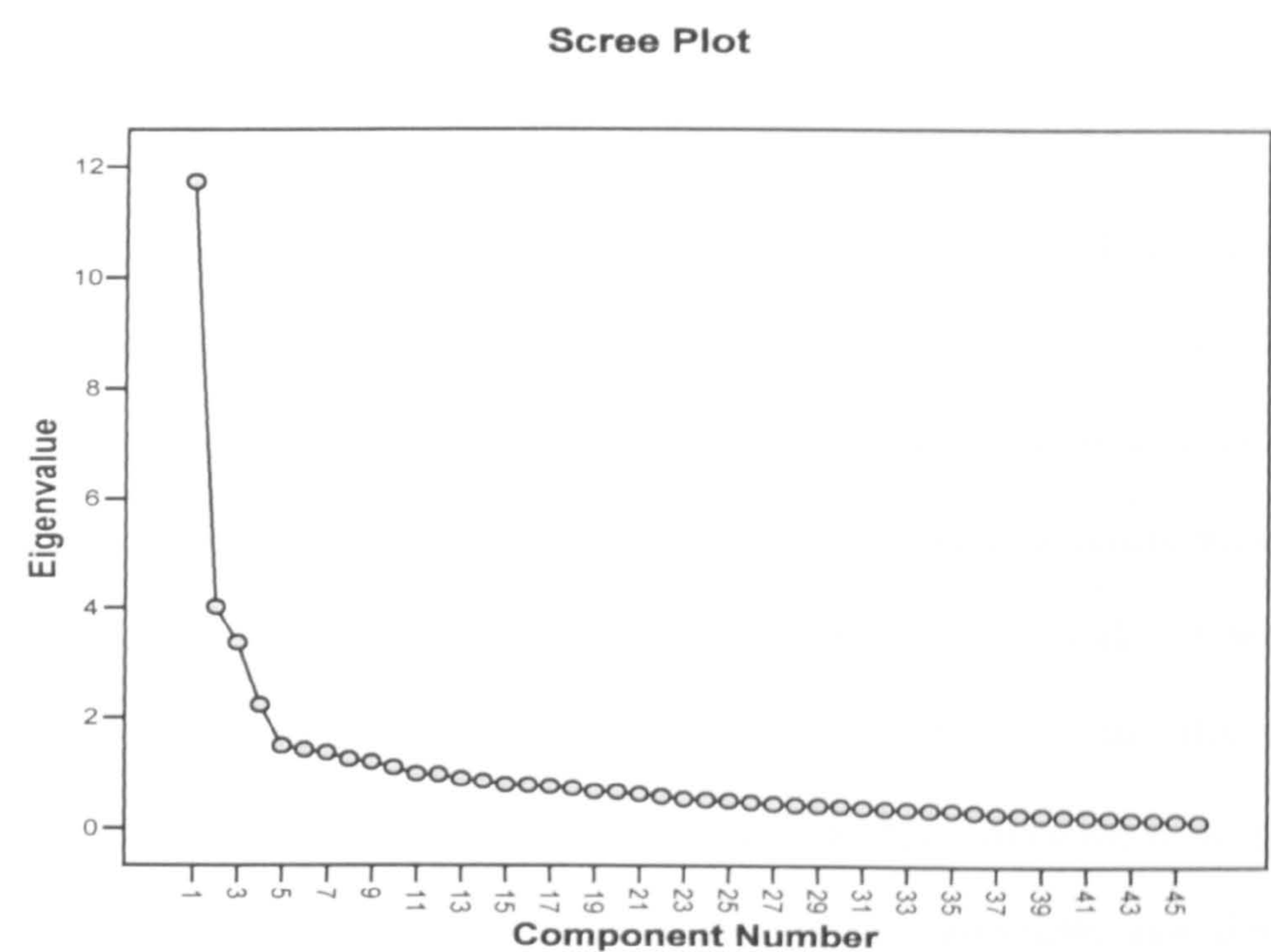


Figure 3: Scree Plot

The analysis was re-run specifying that SPSS extracts four factors, in order to obtain a clearer factor structure. The four factors obtained explained 46% of the common variance after rotation (see Table 11). Varimax rotation was used as not only is this the most common method employed, but it was also not expected that the factors would be related. However, in order to check this assumption, an oblique rotation (in which the factors are allowed to correlate) was also used. An analysis with Direct Obliminal rotation produced an almost identical four factors (see Tables 12a and 12b).

⁵ Given that Kaiser’s criterion applies only when the number of variables is less than 30 or when the sample size exceeds 250, for all other cases the use of a scree plot method is suggested (Field, 2000).

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 11.724 | 25.487 | 25.487 | 11.724 | 25.487 | 25.487 | 5.639 | 12.260 | 12.260 |
| 2 | 4.014 | 8.725 | 34.212 | 4.014 | 8.725 | 34.212 | 5.451 | 11.851 | 24.111 |
| 3 | 3.360 | 7.305 | 41.518 | 3.360 | 7.305 | 41.518 | 5.139 | 11.171 | 35.282 |
| 4 | 2.221 | 4.827 | 46.345 | 2.221 | 4.827 | 46.345 | 5.089 | 11.063 | 46.345 |
| 5 | 1.479 | 3.214 | 49.559 | | | | | | |
| 6 | 1.408 | 3.060 | 52.620 | | | | | | |
| 7 | 1.360 | 2.956 | 55.576 | | | | | | |
| 8 | 1.239 | 2.694 | 58.269 | | | | | | |
| 9 | 1.190 | 2.587 | 60.857 | | | | | | |
| 10 | 1.091 | 2.372 | 63.229 | | | | | | |
| 11 | .976 | 2.121 | 65.350 | | | | | | |
| 12 | .964 | 2.096 | 67.446 | | | | | | |
| 13 | .888 | 1.930 | 69.376 | | | | | | |
| 14 | .845 | 1.837 | 71.213 | | | | | | |
| 15 | .783 | 1.703 | 72.916 | | | | | | |
| 16 | .773 | 1.680 | 74.596 | | | | | | |
| 17 | .755 | 1.642 | 76.238 | | | | | | |
| 18 | .716 | 1.557 | 77.796 | | | | | | |
| 19 | .662 | 1.439 | 79.234 | | | | | | |
| 20 | .657 | 1.429 | 80.663 | | | | | | |
| 21 | .616 | 1.340 | 82.003 | | | | | | |
| 22 | .575 | 1.249 | 83.252 | | | | | | |
| 23 | .529 | 1.149 | 84.402 | | | | | | |
| 24 | .513 | 1.115 | 85.517 | | | | | | |
| 25 | .496 | 1.077 | 86.594 | | | | | | |
| 26 | .467 | 1.015 | 87.609 | | | | | | |
| 27 | .442 | .961 | 88.570 | | | | | | |
| 28 | .421 | .914 | 89.485 | | | | | | |
| 29 | .409 | .889 | 90.374 | | | | | | |
| 30 | .397 | .864 | 91.238 | | | | | | |
| 31 | .372 | .808 | 92.046 | | | | | | |
| 32 | .356 | .773 | 92.819 | | | | | | |
| 33 | .343 | .745 | 93.564 | | | | | | |
| 34 | .329 | .715 | 94.278 | | | | | | |
| 35 | .324 | .704 | 94.983 | | | | | | |
| 36 | .298 | .648 | 95.631 | | | | | | |
| 37 | .262 | .569 | 96.200 | | | | | | |
| 38 | .252 | .548 | 96.749 | | | | | | |
| 39 | .244 | .530 | 97.279 | | | | | | |
| 40 | .226 | .491 | 97.770 | | | | | | |
| 41 | .214 | .466 | 98.235 | | | | | | |
| 42 | .197 | .428 | 98.663 | | | | | | |
| 43 | .175 | .380 | 99.044 | | | | | | |
| 44 | .164 | .357 | 99.400 | | | | | | |
| 45 | .149 | .325 | 99.725 | | | | | | |
| 46 | .126 | .275 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Table 11: Satisfaction with Time Use 4-factor solution: Total variance explained

| | Component | | | |
|--|-----------|-------|-------|-------|
| | 1 | 2 | 3 | 4 |
| 61. If I should die today, I would feel that my life has been worthwhile | .740 | | | |
| 54. I like what I do | .680 | | | |
| 70. Looking at a typical day in my life, I think that most things I do have some purpose | .662 | | | |
| 27. There is a lot of variety in my life | .644 | | | |
| 67. My daily activities often seem trivial and unimportant to me | -.620 | | | |
| 57. I often feel that what I do is meaningless | -.603 | | | |
| 64. I don't have a good sense of what it is I'm trying to accomplish in life | -.602 | | | |
| 56. I really wish there was more variety in my life | -.595 | | | |
| 66. I feel in harmony with myself | .588 | | | |
| 62. I feel I am making progress | .549 | | | |
| 55. I live my life in accordance with my goals | .499 | | | |
| 69. I am not happy with my progress | -.494 | | .418 | |
| 63. I often question if I have made right decisions | -.443 | | | |
| 31. I work too much | | -.703 | | |
| 49. I feel I have a balance of activities in my life | | .698 | | |
| 48. I am comfortable with the work-life boundaries in my life | | .692 | | |
| 33. I take some time for myself on a daily basis | | .688 | | |
| 40. I feel that different areas of my life are well balanced | | .679 | | |
| 50. I never have time for myself | | -.630 | | |
| 38. I have a balance between what I want to do and what I have to do | | .620 | | |
| 68. I have to work longer hours in order to meet deadlines | | -.500 | | |
| 53. I often find myself in conflict | | -.422 | | |
| 23. I am often anxious about time | | | .734 | |
| 14. I rarely worry about time | | | -.565 | |
| 11. I feel time is slipping away through my fingers | | | .563 | |
| 21. I feel overwhelmed by my responsibilities | | -.475 | .547 | |
| 25. I find it hard to maintain discipline | | | .545 | |
| 59. I often feel guilty about not having done something | | | .540 | |
| 17. My time doesn't seem to belong to me | | -.463 | .503 | |
| 6. I often don't have time to accomplish my tasks | | | .460 | |
| 5. I have trouble organising things that I have to do | | | .458 | |
| 16. I usually feel in control of my time | | | -.439 | |
| 39. I am often unrealistic about what can or cannot be done within a time period | | | | |
| 44. My life is chaotic | | | | |
| 4. I often check if I am making the best use of my time | | | | .680 |
| 22. I waste a lot of time | | | | -.652 |
| 3. I am careful not to waste my time | | | | .649 |
| 10. I find it easy to organise my time | | | -.441 | .624 |
| 9. I take responsibility for my time | | | | .562 |
| 41. When I have lots to do I just get on with it | | | | .558 |
| 13. I rarely procrastinate | | | | .557 |
| 52. I usually achieve something within each day | | | | .530 |
| 45. I stick to my aims even when it gets hard | | | | .518 |
| 60. At this time I am meeting goals that I have set for myself | | | | .486 |
| 58. Days often go by without me having done a thing | | | | -.471 |
| 18. I am quite good in managing the many responsibilities of my daily life | | | | .417 |

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Norm.
a Rotation converged in 12 iterations.

Table 12a: Rotated component matrix using Varimax rotation

| | Component | | | |
|--|-----------|-------|-------|-------|
| | 1 | 2 | 3 | 4 |
| 31. I work too much | -.753 | | | |
| 33. I take some time for myself on a daily basis | .700 | | | |
| 49. I feel I have a balance of activities in my life | .695 | | | |
| 48. I am comfortable with the work-life boundaries in my life | .685 | | | |
| 40. I feel that different areas of my life are well balanced | .665 | | | |
| 50. I never have time for myself | -.634 | | | |
| 38. I have a balance between what I want to do and what I have to do | .615 | | | |
| 68. I have to work longer hours in order to meet deadlines | -.512 | | | |
| 21. I feel overwhelmed by my responsibilities | -.466 | | | .433 |
| 17. My time doesn't seem to belong to me | -.455 | | | |
| 53. I often find myself in conflict | | | | |
| 44. My life is chaotic | | | | |
| 4. I often check if I am making the best use of my time | | .695 | | |
| 22. I waste a lot of time | | -.685 | | |
| 3. I am careful not to waste my time | | .657 | | |
| 10. I find it easy to organise my time | | .653 | | |
| 13. I rarely procrastinate | | .604 | | |
| 41. When I have lots to do I just get on with it | | .581 | | |
| 9. I take responsibility for my time | | .571 | | |
| 52. I usually achieve something within each day | | .509 | | |
| 45. I stick to my aims even when it gets hard | | .508 | | |
| 60. At this time I am meeting goals that I have set for myself | | .483 | | |
| 58. Days often go by without me having done a thing | | -.463 | | |
| 18. I am quite good in managing the many responsibilities of my daily life | | .418 | | |
| 16. I usually feel in control of my time | | | | |
| 39. I am often unrealistic about what can or cannot be done within a certain time period | | | | |
| 61. If I should die today, I would feel that my life has been worthwhile | | | .751 | |
| 54. I like what I do | | | .682 | |
| 27. There is a lot of variety in my life | | | .658 | |
| 70. Looking at a typical day in my life, I think that most things I do have some purpose | | | .647 | |
| 57. I often feel that what I do is meaningless | | | -.647 | |
| 67. My daily activities often seem trivial and unimportant to me | | | -.641 | |
| 64. I don't have a good sense of what it is I'm trying to accomplish in life | | | -.617 | |
| 56. I really wish there was more variety in my life | | | -.602 | |
| 66. I feel in harmony with myself | | | .561 | |
| 62. I feel I am making progress | | | .510 | |
| 55. I live my life in accordance with my goals | | | .473 | |
| 69. I am not happy with my progress | | | -.469 | |
| 63. I often question if I have made right decisions | | | -.426 | |
| 23. I am often anxious about time | | | | .701 |
| 14. I rarely worry about time | | | | -.560 |
| 59. I often feel guilty about not having done something | | | | .512 |
| 25. I find it hard to maintain discipline | | | | .496 |
| 11. I feel time is slipping away through my fingers | | | | .475 |
| 6. I often don't have time to accomplish my tasks | | | | |
| 5. I have trouble organising things that I have to do | | | | |

Extraction Method: Principal Component Analysis. Rotation Method: Obliminal with Kaiser Norm.
a Rotation converged in 29 iterations.

Table 12b: Pattern matrix using Direct Obliminal rotation

Pedhazur and Schmelkin (1991) state that if the oblique rotation results in a small or negligible correlation between the extracted factors then it is reasonable to use an orthogonal rotation. An examination of the component correlation matrix revealed the majority of correlations to be between 0.13 and 0.25, with only one correlation at .30 (see Table 13). Even though the factors extracted with the help of Varimax and Direct Obliminal rotations were almost identical, factor four in the Direct Obliminal option yielded a less reliable factor solution in terms of the size of coefficient alpha, which is why a decision was made to proceed with the Varimax solution.

| Component | 1 | 2 | 3 | 4 |
|-----------|-------|-------|-------|-------|
| 1 | 1.000 | .164 | .231 | -.251 |
| 2 | .164 | 1.000 | .300 | -.198 |
| 3 | .231 | .300 | 1.000 | -.131 |
| 4 | -.251 | -.198 | -.131 | 1.000 |

Extraction Method: Principal Component Analysis.
 Rotation Method: Obliminal with Kaiser Normalization.

Table 13: Component Correlation Matrix

The Kaiser-Meyer-Olkin measure was used to assess sampling adequacy (Field, 2000). Its value is 0.86, as can be seen from Table 14. Values between .8 and .9 are considered good, which means that factor analysis is appropriate for this data. It shows that patterns of correlations are relatively compact, which indicates that factor analysis is likely to yield distinct and reliable factors. In addition to the overall KMO statistics, the diagonal elements of the anti-image correlation matrix were carefully examined for any values below 0.5. All values were well above 0.5, indicating that KMO values for individual variables support the abovementioned conclusion. Bartlett’s measure was used to test the null hypothesis that the original correlation matrix is an identity matrix. It was highly significant, which also indicates that factor analysis is appropriate, as there are some relationships between the variables included in the analysis.

| | | |
|--|--------------------|--------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .864 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 3731.4 |
| | df | 66 |
| | Sig. | 1035 |
| | | .000 |

Table 14: KMO and Bartlett's Test

In running the analysis, the values of factor loadings less than 0.4 were suppressed (as recommended by Stevens, 1992). Guadagnoli and Velicer (1988) argue that the sample size and factor loadings are the most important factors in determining a reliable factor solution. They state that if a factor has four or more loadings greater than .6, it can be considered reliable regardless of sample size. Three of the four extracted factors (see Table 12a) satisfy this criterion. Moreover, they found that factors with ten or more loadings greater than .40 are reliable if the sample size is greater than 150. The third factor (see Table 12a) satisfies the latter condition.

The reliability analysis of all four factor scales has shown very good reliability with all Chronbach's alpha coefficients above 0.8. The four factors identified are discussed below.

Factor 1: Liking what one does and perceiving it as worthwhile

Factor one incorporates the questionnaire items related to liking one's activities and perceiving what one does as worthwhile, originated from the first two themes of the previous study. The factor also draws on a sense of congruence between one's life goals and their activities, and includes variety. In most respects it is very similar to the factor one described in the initial eleven-factor solution; however it also incorporates two variety items. This factor overlaps considerably with the first factor pre-rotation (which explained 25% of the variance), although the latter also combined items from the second and fourth factors. It has 13 items, seven of which have loadings of .6 or above, it explains 12.3% of variance after rotation and has a high reliability at $\alpha = .881$.

- 61. If I should die today, I would feel that my life has been worthwhile
- 54. I like what I do
- 70. Looking at a typical day in my life, I think that most things I do have some purpose
- 27. There is a lot of variety in my life
- 67. (-) My daily activities often seem trivial and unimportant to me
- 57. (-) I often feel that what I do is meaningless
- 64. (-) I don't have a good sense of what it is I'm trying to accomplish in life
- 56. (-) I really wish there was more variety in my life
- 66. I feel in harmony with myself
- 62. I feel I am making progress
- 55. I live my life in accordance with my goals
- 69. (-) I am not happy with my progress
- 63. (-) I often question if I made the right decisions

Factor 2: Balance

The second factor is very similar to the balance and variety of activities qualitative theme and comprises 9 items informed by it. It is also identical to the second factor in the eleven-factor solution, although it includes one additional item. Seven of the nine items have loadings above .6. Factor two explains 11.8% of variance after rotation and has an alpha coefficient of .866.

- 31. (-) I work too much
- 49. I feel I have a balance of activities in my life
- 48. I am comfortable with the work-life boundaries in my life
- 33. I take some time for myself on a daily basis
- 40. I feel that different areas of my life are well-balanced
- 50. (-) I never have time for myself
- 38. I have a balance between what I want to do and what I have to do
- 68. (-) I have to work longer hours in order to meet deadlines
- 53. (-) I often find myself in conflict

Factor 3: Time anxiety and lack of control

Factor 3 relates to worrying about time, feeling overwhelmed and out of control. With regard to the results of the first study, it draws on the reverse of taking responsibility and feeling in control and the elements of the tenth theme time anxiety and perspectives on time. This factor also represents an amalgamation of two factors from the initial solution. Thus it contains all but one item from factor five and the negative items from factor four. Although only the first item has loading above .6 at .73, all ten items have

loadings above .4. The third factor accounts for 11.2% of variance after rotation.

Chronbach's alpha coefficient of its ten items equals .836.

- 23. I am often anxious about time
- 14 (-) I rarely worry about time
- 11. I feel time is slipping away through my fingers
- 21. I feel overwhelmed by my responsibilities
- 25. I find it hard to maintain discipline
- 59. I often feel guilty about not having done something
- 17. My time doesn't seem to belong to me
- 6. I often don't have time to accomplish my tasks
- 5. I have trouble organising things that I have to do
- 16 (-) I usually feel in control of my time

Factor 4: Responsibility and Achievement

The final factor in this solution brings together a part of the taking responsibility and feeling in control qualitative theme with achievement vs. wasting time. It also incorporates some elements of discipline and organisation. It also directly corresponds to the third factor in the initial solution. For items have loadings of .6 and above and the remaining eight items are at .4 and above. This factor explains 11.0% of variance, and is highly reliable with $\alpha = .853$.

- 4. I often check if I am making the best use of my time
- 22 (-) I waste a lot of time
- 3. I am careful not to waste my time
- 10. I find it easy to organise my time
- 9. I take responsibility for my time
- 41. When I have lots to do I just get on with it
- 13. I rarely procrastinate
- 52. I usually achieve something within each day
- 45. I stick to my aims even when it gets hard
- 60. At this time I am meeting goals that I have set for myself
- 58(-) Days often go by without me having done a thing
- 18. I am quite good in managing the many responsibilities of my daily life

To conclude this part, the principal component analysis revealed four underlying factors in the satisfaction with time use questionnaire. The Varimax solution was chosen over the oblique methods of rotation as the correlations between the factors in the oblique solution were low and the Varimax method offered a more reliable factor solution. Several statistical methods confirmed that factor analysis was appropriate for this data,

and that the resulting scales appear both highly meaningful and reliable. Factor scores calculated for each of the scales will be used in the subsequent analyses.

Field (2000) points out that when principle component analysis is used, conclusions are restricted to the sample collected and generalisations can only be made if an analysis using different samples reveals the same factor structure. Thus the use of factor analysis here should be considered exploratory.

6.3. Multiple regression analysis

Hypothesis 2: The replicated factors will explain a substantial proportion of variance of satisfaction with time use, forming a significant model.

In order to test hypothesis 2, the data was subjected to multiple regression analysis with all four factors identified acting as predictor variables and satisfaction with time use (SWTU) as the criterion variable. Question 26 “Overall, I am satisfied with the way I use my time” was used as the single item measure (Hafstrom & Paynter, 1991).

Both Field (2000) and Brace et al (2003) recommend the use of the “enter” over the *stepwise* method in multiple regression. In the enter method all predictors are forced into the model simultaneously, while in the stepwise method, the statistical programme enters the predictors into the model one by one, based on their power to predict the outcome variable⁶. The analysis presented below is based on the enter method, although a stepwise model was also tested for comparison purposes.

Using the enter method, a promising significant model emerged (the significance of the model will be demonstrated later), with all four identified factors accounting for 40% of variance in satisfaction with time use.

⁶ Field (2000) argues that the stepwise method takes many methodological decisions out of the hands of the researcher and points at several problems associated with it. The hierarchical method was clearly inapplicable here because there were no grounds on which to decide which predictors should be entered into the model first.

It can be seen from the Table 15 below that R Square, a measure of how much variability in the criterion variable is accounted for by the predictors, has the value of .415, i.e. up to 41% of the variance in satisfaction with time use can be explained by the four factors from the principle component analysis. (The adjusted R Square offers an indicator of how well the model can be generalised, and is acceptably close to the value of R Square).

The Durbin-Watson statistic is close to the recommended value of 2, and does not fall below 1 or above 3. This indicates that adjacent residuals are not correlated, which is one of the major assumptions of regression (Field, 2000).

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|-------|---------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .644(a) | .415 | .401 | .758 | .415 | 29.794 | 4 | 168 | .000 | 1.894 |

a Predictors: (Constant), A-R factor score 4 for analysis 1 , A-R factor score 3 for analysis 1 , A-R factor score 2 for analysis 1 , A-R factor score 1 for analysis 1

b Dependent Variable: 26. Overall, I am satisfied with the way I use my time

Table 15: Satisfaction with Time Use regression summary

Table 16 contains the analysis of variance that assesses the overall significance of the predictor variables. The value of F at 29.794, is highly significant at $p < 0.0005$.

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|---------|
| 1 | Regression | 68.504 | 4 | 17.126 | 29.794 | .000(a) |
| | Residual | 96.571 | 168 | .575 | | |
| | Total | 165.075 | 172 | | | |

a. Predictors: (Constant), A-R factor score 4 for analysis 1 , A-R factor score 3 for analysis 1 , A-R factor score 2 for analysis 1 , A-R factor score 1 for analysis 1

b. Dependent Variable: 26. Overall, I am satisfied with the way I use my time

Table 16: Analysis of variance (ANOVA)

If we turn to examine the table of coefficients (Table 17 below), the standardised beta coefficients reported in it provide a measure of the contribution of each variable to the model. It appears that factor 4 (achievement and responsibility) has the largest effect on

the dependent variable, followed by factors 3 (*time anxiety and lack of control*), 2 (*balance*) and 1 (*liking what one does and perceiving it as worthwhile*). All factors are highly significant, although factor 1 has a slightly lower degree of significance at $p = 0.002$. When the analysis was re-run using the stepwise method, the abovementioned hierarchy was confirmed, with SPSS entering factor 4 first and the other three in the same order as stated above. In this context factor 1 appears as the least important, although its significance remains at $p < 0.01$.

Beta values indicate that whilst there is a positive relationship between satisfaction with time use and three of the predictors, there is a negative relationship between factor 3 and satisfaction with time use. This is expected because factor 3 is a negative factor representing *time anxiety and lack of control*.

| Model | | Unstandardised Coefficients | | Standardised Coefficients | T | Sig. |
|-------|-----------------------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.468 | .058 | | 60.167 | .000 |
| | A-R factor score 1 for analysis 1 | .181 | .058 | .185 | 3.131 | .002 |
| | A-R factor score 2 for analysis 1 | .312 | .058 | .319 | 5.398 | .000 |
| | A-R factor score 3 for analysis 1 | -.317 | .058 | -.323 | -5.479 | .000 |
| | A-R factor score 4 for analysis 1 | .410 | .058 | .418 | 7.086 | .000 |

a Dependent Variable: 26. Overall, I am satisfied with the way I use my time

Table 17: Coefficients of the regression model

A key step in regression analysis is to check the assumptions of the model (Field, 2000). Thus residual statistics (casewise diagnostics) have been examined for extreme cases. Large residuals (which are errors present in the model) represent a poor fit of the model to the sample data. It is expected that 95% of cases should have standardised residuals within ± 2 (Field, 2000). The data set has 9 cases falling outside of these limits, constituting 5.2%. In addition, 99% of cases should lie within ± 3 . We have 2 cases,

constituting 1.15%, falling outside this parameter. As both of these values are very close to the specified criteria, they were deemed acceptable.

Examination of both the histogram (see Figure 4 below) and the probability plot further shows that residuals approximate to a normal distribution.

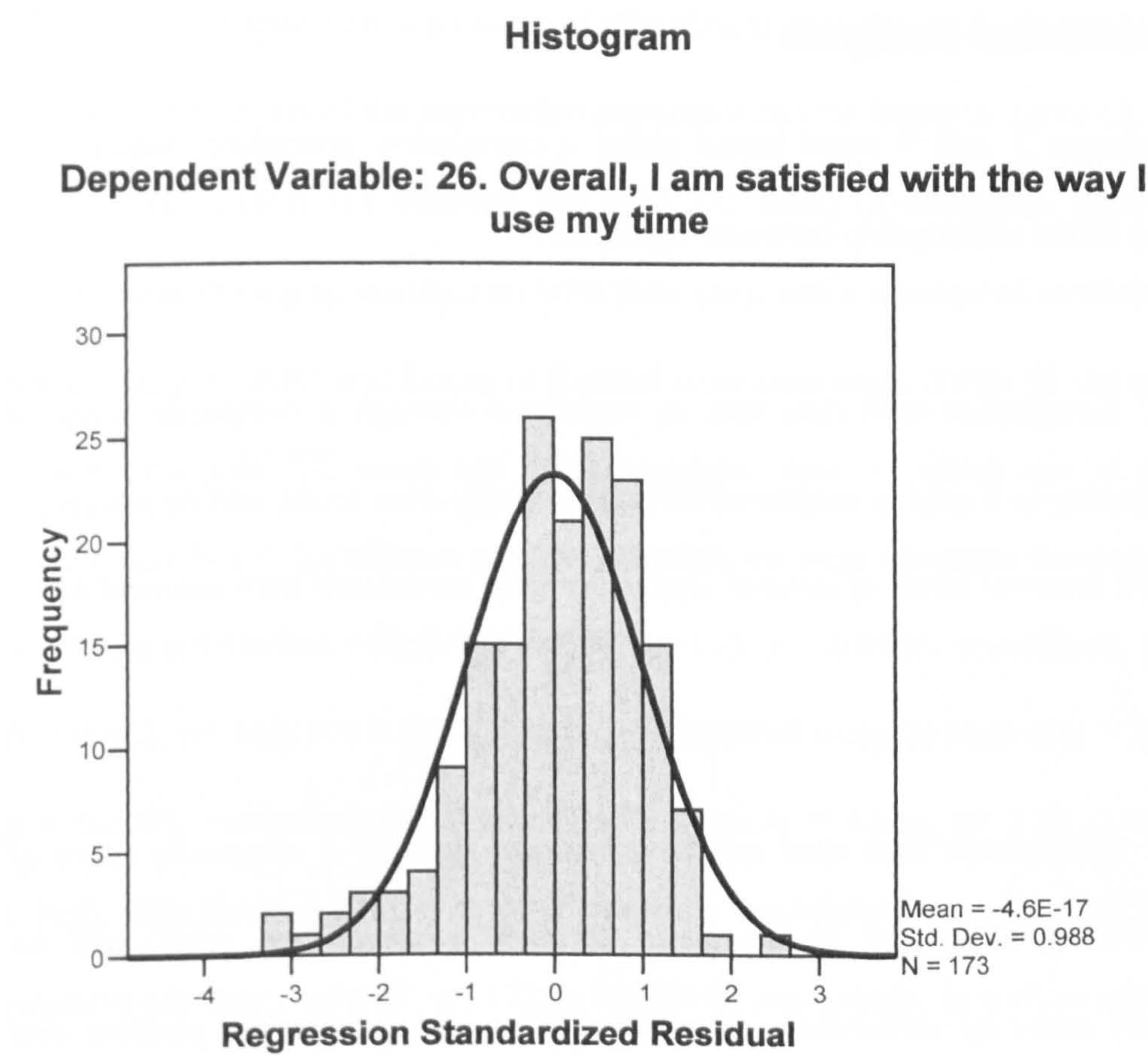


Figure 4: Histogram of residuals distribution

It can be concluded that the four factors predict about 40% of the variance of the single measure of satisfaction with time use. This is highly significant statistically. ($F_{4.168} = 29.794, p < 0.0005$). Adjusted R Square = .401. Significant variables include:

| Predictor Variable | Beta | <i>p</i> |
|--------------------|-------|--------------|
| Factor 4 | .418 | $p < 0.0005$ |
| Factor 3 | -.323 | $p < 0.0005$ |
| Factor 2 | .319 | $p < 0.0005$ |
| Factor 1 | .185 | $p = 0.002$ |

Since the model does not explain a large percentage of the variance, factors other than those used as predictor variables may also be important for explaining satisfaction with time use.

6.4. Correlational analyses

Finally, hypotheses 3 and 4 were tested using a correlation procedure, which is a measure of the linear relationship between variables.

Hypothesis 3: Satisfaction with time use, as measured through a composite score of factors contributing to it and as measured through a single-item scale, will be positively associated with internal locus of control and negatively associated with external locus of control.

Hypothesis 4: Satisfaction with time use, as measured through a composite score of factors contributing to it and as measured through a single-item scale, will be associated with sense of well-being, as measured by life satisfaction, positive and negative affect, and sense of coherence.

Satisfaction with time use was measured through both a single question no 26 (SWTU) and as a composite score of factors derived through the principal component analysis (TU TOTAL). The scores on the existing scales (satisfaction with life – SWL, positive affect – PA, negative affect – NA, internal locus of control – INT LOC, external locus of control – EXT LOC and sense of coherence – SOH) have been calculated according to the corresponding instructions (see Chapter 4), reverse scoring the items where necessary.

The data satisfied parametric assumptions, so Pearson's r parametric test of correlation was used. All of the variables were measured on Likert scales taken to result in interval data, the data from different subjects was independent, variance was homogeneous and most variables were either normally distributed or their distribution curve closely approximated normality.

Having specified a number of directional hypotheses, a one-tailed option was selected. The results of the correlation procedure can be found in Table 18.

The correlations between the total TU score (a composite score of the four factors contributing to satisfaction with time use), and a number of constructs, including SWL, PA, NA, SOC, and Locus of Control were examined. Table 18 shows correlations between the total TU score and these variables, most of which are of good size and highly significant. Significant positive correlations were observed between the total TU score and satisfaction with life ($r = .590$, $n = 173$, $p < 0.0005$, one-tailed), positive affect ($r = 0.462$, $n = 169$, $p < 0.0005$, one-tailed), internal locus of control ($r = 0.343$, $n = 171$, $p < 0.0005$, one-tailed) and sense of coherence ($r = 0.646$, $n = 172$, $p < 0.0005$, one-tailed). Significant negative correlations were established between total TU score and negative affect ($r = -0.484$, $n = 172$, $p < 0.0005$, one-tailed), as well as external locus of control ($r = -0.243$, $n = 173$, $p = 0.001$, one-tailed).

The outcomes of the correlation procedure demonstrate that the single item measure of satisfaction with time use (SWTU) shows moderate positive significant correlations with satisfaction with life at 0.373 ($p < 0.0005$), sense of coherence at 0.322 ($p < 0.0005$) and very modest positive relationships with the measure of positive affect at 0.263 ($p < 0.0005$) and internal locus of control at 0.19 ($p < 0.05$). Furthermore, it has a modest negative relationship with negative affect at -0.269. ($p < 0.0005$). There is no significant relationship between SWTU and external locus of control. This may indicate possible problems with using a single measure.

| | | TU TOTAL | SWTU | SWL | PA | NA | INT LOC | EXT LOC | SOC |
|--------------|------------------------|-------------|-----------|-----------|----------|-----------|------------|-----------|-----------|
| TU TOTAL | Pearson Correlation | 1 | .622(**) | .590(**) | .462(**) | -.484(**) | .343(**) | -.243(**) | .646(**) |
| | Sig. (1-tailed) | | .000 | .000 | .000 | .000 | .000 | .001 | .000 |
| | N | 173 | 173 | 173 | 169 | 172 | 171 | 173 | 172 |
| SWTU | Pearson Correlation | .622(**) | 1 | .373(**) | .263(**) | -.269(**) | .190(**) | -.067 | .322(**) |
| | Sig. (1-tailed) | .000 | | .000 | .000 | .000 | .006 | .190 | .000 |
| | N | 173 | 173 | 173 | 169 | 172 | 171 | 173 | 172 |
| SWL | Pearson Correlation | .590(**) | .373(**) | 1 | .398(**) | -.365(**) | .417(**) | -.322(**) | .637(**) |
| | Sig. (1-tailed) | .000 | .000 | | .000 | .000 | .000 | .000 | .000 |
| | N | 173 | 173 | 173 | 169 | 172 | 171 | 173 | 172 |
| PA | Pearson Correlation | .462(**) | .263(**) | .398(**) | 1 | -.146(*) | .367(**) | -.193(**) | .464(**) |
| | Sig. (1-tailed) | .000 | .000 | .000 | | .030 | .000 | .006 | .000 |
| | N | 169 | 169 | 169 | 169 | 168 | 167 | 169 | 168 |
| NA | Pearson Correlation | -.484(**) | -.269(**) | -.365(**) | -.146(*) | 1 | -.147(*) | .249(**) | -.603(**) |
| | Sig. (1-tailed) | .000 | .000 | .000 | .030 | | .028 | .000 | .000 |
| | N | 172 | 172 | 172 | 168 | 172 | 170 | 172 | 171 |
| INT LOCUS | Pearson Correlation | .343(**) | .190(**) | .417(**) | .367(**) | -.147(*) | 1 | -.235(**) | .339(**) |
| | Sig. (1-tailed) | .000 | .006 | .000 | .000 | .028 | | .001 | .000 |
| | N | 171 | 171 | 171 | 167 | 170 | 171 | 171 | 170 |
| EXT LOCUS | Pearson Correlation | -.243(**) | -.067 | -.322(**) | .193(**) | .249(**) | .235(**) | 1 | -.381(**) |
| | Sig. (1-tailed) | .001 | .190 | .000 | .006 | .000 | .001 | | .000 |
| | N | 173 | 173 | 173 | 169 | 172 | 171 | 173 | 172 |
| SOC | Pearson Correlation | .646(**) | .322(**) | .637(**) | .464(**) | -.603(**) | .339(**) | -.381(**) | 1 |
| | Sig. (1-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .000 | |
| | N | 172 | 172 | 172 | 168 | 171 | 170 | 172 | 172 |

** Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

Table 18: Table of correlations between the total perceived time use score and satisfaction with life (SWL), positive affect (PA), negative affect (NA), sense of coherence (SOC), internal and external loci of control

The lowest correlations in the table can be observed between internal/external locus of control and other variables. This can be explained by the low reliability of the locus of control scales. As indicated in section 4.9.2.5, alpha reliability of the internal dimension was only 0.47, whilst $\alpha = 0.33$ for the external dimension. These values are

substantially below the recommended value of 0.7 (Field, 2000). However if, according to Lumpkin's (1985) recommendations, all six questions on the brief measure are evaluated as one scale (reverse scoring the items for the external dimension), the alpha rises slightly to 0.49. The levels of correlations between the total measure of locus of control and other variables also improve. Thus it correlates at 0.38 with the total TU score, at 0.17 ($p < 0.05$) with SWTU, 0.47 with SWL, 0.37 with PA, -0.24 with NA and 0.46 with sense of coherence. All but one of these correlations are at $p < 0.001$ level of significance.

With respect to interrelationships of the other variables, sense of coherence correlates highly with the other measures of well-being (satisfaction with life, positive affect, negative affect), which is consistent with the literature discussed earlier. The correlation between positive and negative affect is almost non-existent (at 0.15), which offers some evidence for their independence. Variables of internal and external locus of control have moderate correlations with satisfaction with life (0.42 and -0.32 respectively) and sense of coherence (0.34 and -0.38 respectively). Internal locus of control correlates positively with positive affect at 0.37.

It can be concluded that the above results provide support for hypothesis 4, whilst the evidence in support of hypothesis 3 is inconclusive. Nevertheless, correlations cannot be interpreted as giving an indication of the direction of causality. Although we can say that the more satisfied a person is with their time, the happier he or she is likely to be, we cannot claim that satisfaction with one's time is a cause of one's happiness or vice versa.

The significance of the results obtained in both studies is discussed in Chapter 7.

CHAPTER 6 SUMMARY:

- The rationale underlying the second study was to investigate if the factors identified in the previous study were replicated with a larger sample and to see which ones carry more weight. The second objective was to look at the relationships between the variables of satisfaction with time use, factors contributing to satisfaction with time use, subjective well-being, sense of coherence and locus of control.
- The first hypothesis was investigated using factor analysis applied to the questionnaire items related to satisfaction with time use. The initial eleven-factor solution, reported in section 6.2.1, was found to be unsatisfactory on the grounds of both the reliability analyses and difficulties in interpretation.
- After data screening, 24 items were removed from the first questionnaire measuring satisfaction with time use. A principal component analysis revealed four main factors in the Satisfaction With Time Use Questionnaire, which explained 46% of common variance. The Varimax solution was chosen over an oblique method of rotation as the factors were not expected to correlate and as it produced a more satisfactory solution. The results of Kaiser-Meyer-Olkin and Bartlett's tests indicated that it was appropriate to apply factor analysis to this data set. The four underlying scales achieved had good factor loadings and high reliability, suggesting that a reliable factor solution has been reached. The results of this principle component factor analysis are exploratory and further refinement is possible.
- In order to test hypothesis 2, the data was subjected to multiple regression analysis with all four factors identified acting as predictor variables with a single-item measure of satisfaction with time use as the criterion variable. The predictor factors explained 40% of variance in satisfaction with time use. Several additional tests were used to confirm the applicability of the statistics and assumptions used as applied to this dataset.

- At the final stage of the analysis, the relationships between the variables of satisfaction with time use and measures of well-being and locus of control were examined, testing hypotheses 3 and 4. Satisfaction with time use as measured by the composite score of factors revealed as a result of the principal component analysis, has attracted moderate to high significant correlations with the measures of well-being (life satisfaction, positive affect, negative affect and sense of coherence) and very low correlations with locus of control. The single-item measure of satisfaction with time use attracted a similar pattern of correlations, albeit at a lower level. The relationships between internal/external loci of control and other variables were generally low. This may be explained by the fact that the locus of control measure used in this study had unacceptable psychometric properties in terms of scale reliability.

CHAPTER 7: DISCUSSION

The focus of discussion will be on how the results of the studies reported inform the research questions posed at the beginning of this thesis and on how these findings relate to and add to the relevant literature. The chapter will be structured around the research questions. Questions that appear related in the light of empirical work will be grouped together.

7.1. Making sense of time-related experiences: experience of time use and time anxiety

This section will discuss the findings that inform the following research questions:

1.1. What is the participants' experience of their time use?

1.3. How do participants relate to the experience of time pressure or time anxiety?

Robinson and Godbey (1997), McGrath and Tschan (2004) and other prominent scholars of time believed that in order to understand how people experience time we need to use qualitative methods of data collection and analysis. The qualitative approach employed in the first study helped the researcher to bring to the surface the meanings of time use and a deeper understanding of its experience. For the participants in this first study, the experience of time use emerged in the form of several descriptions and metaphors⁷: *time anxiety, time as slow, time as a matter of perspective, time as flight, time as real, time as unlimited, time as absolute and finite, time as limiting constraint, time as commodity, time as a container, time as a jewel and time as a mechanism*. A number of them appear to be in direct opposition to each other. For example, *time as flight* can be contrasted with *time as slow, time as real* – with *time as a matter of*

⁷ Strictly speaking, the figurative expressions such as “time as a container” are not metaphors, but similes. However, for practical purposes, it was decided to use the term “metaphor” as a more common one, utilised more often in psychological literature. Furthermore, some would argue that a simile is a specific type of metaphor.

perspective, and *time as unlimited* – with *time as absolute and finite*. These opposing descriptions and metaphors are at work not only between but also within individuals. Different people at different stages of their lives and in different situations experience time differently. For example, time may be real for one, whilst another would experience it as something mechanical out there that doesn't penetrate into his or her consciousness. Time can fly by or it may move like a tortoise. For example, time is usually racing by for JT1 a busy professional with three small children, yet she experienced it as never-ending when she was ill in hospital.

But, you know, I have experienced times where it's been really slow, like when I was ill. And that... I mean time, it was the worst thing ever! Everything took forever and I was constantly looking at my watch and sometimes only a day went past and it felt like a week. It was because it was a torture, it was painful. I was just laying on a bed, a hospital bed, not able to do anything and it just went really slow. And I remember, hour by hour, being awake and not being able to sleep because... I don't know, because of the drugs, perhaps, that kept me awake, I don't know. But I just remember it just taking forever and (husband's name) would leave because visiting time would end and then it would just seem forever before the next morning when someone would come and visit again (JT1, Para 178).

Although personality differences may influence the way we experience time and its use, this experience is probably as much a matter of circumstances, cognitive judgements and deliberate choices. One of the metaphors, *time as a container*, allocates only a supportive role to time, leaving the centre stage for the contents of time. BF describes it well by saying: "I don't think of time in terms of clock time, a traditional, linear sense of time. I think of it as, you know, empty buckets that you fill with activities and things and people" (Para 24). Whilst on the one hand, time here is clearly a construct that does not have an independent objective existence; it becomes real through being filled with objective activities. For that reason this metaphor can be seen to unite the objective and subjective in the experience of time use. "There is no intrinsic meaning in time", concluded Lofy in her PhD (2000, p. 119). The meaning, however, is created by filling time with the elements chosen by ourselves. Time is therefore what we make of it. The metaphor also reveals a proactive, responsible approach to time, which is contrary to a reactive attitude embedded in feelings of time anxiety.

Metaphor seems a convenient way to express and structure how we experience time use. Lakoff & Johnson (1999) state that "...it is virtually impossible for us to conceptualise time without metaphor" (p. 139). While the researcher does not fully agree with this claim (most of the themes brought up by the participants are descriptions rather than similes or metaphors), she finds certain commonalities between her analysis and the findings of other researchers. For example, some of the themes from her study echo the metaphors discovered by Bennett-Woods (2004) in her research on how time is experienced by managers in a health-care setting. They conceptualised time as structure, as barrier and boundary, as accomplishment, as relationship, as precious and scarce, and as enemy and ally. We can see, for instance, that participants in both studies acknowledged the objective features of time through approaching it *as real* or *as a mechanism* or referring to it's structure. There are other close correspondences in the metaphors identified, including references to *time as a limiting constraint* and a boundary, or *time as a jewel* or as precious. Bennett-Wood's *time as an enemy* metaphor resembles several utterances within the emergent theme on *time anxiety*. Moreover, Bennett-Woods (2004) accomplishment and relationship metaphors are reflected in the factors of time use considered more thoroughly later in the chapter.

Several descriptions identified as a result of the first, qualitative study also show parallels with some of the theoretical conceptualisations offered by Lakoff & Johnson (1999) concerning metaphors for time. For instance, *time as absolute and finite* or *as unlimited* correspond to their metaphor of temporal orientation, *time as fast or slow* – to the moving time metaphor, *time as limiting constraint* and *as a jewel* – to time as a resource and as money.

The multitude of metaphorical expressions considered above poses the question of whether the variety of temporal experiences is potentially limited or unlimited. This is a question that may require further research in order to answer it with certainty. However, the researcher believes that whilst the metaphors of temporal experience are

potentially endless, categories of experience may be limited, which would make it possible to capture them.

Abul'-khanova-Slavskaia (1996), in her systematic approach to understanding personal organisation of time, emphasised the subjective emotional experience of time as one of the three central tenets of time use (the other two are cognitive awareness of time and the temporal organisation of activity). The descriptions arising in the first study closely correspond to what she saw as the defining features of the subjective emotional experience of time, namely: extension, emotionality and stress level. To elaborate, seeing *time as unlimited* or *as absolute and finite* signals to what extent our perception of time is extended into the future, whilst experiencing *time anxiety* and *time as a limiting constraint* betrays a certain level of stress. Seeing *time as a jewel* may reveal a certain level of emotional attachment to it, because time is experienced as precious. The above suggests that for many time is a deep emotional experience, which would also explain the prevalence of time anxiety discourse in the media, popular literature and in the results of this study.

The theme of *time anxiety*, related to time famine (Banks, 1983) and time crunch (Robinson and Godbey, 1997), attracted 21 passages from 9 participants. It surfaced as a prominent experience for those dissatisfied with their time use (only 1 of 9 was satisfied). These participants reported being late with their projects or overwhelmed by things to do, which caused them to experience anxiety and frustration. "Suddenly ... it is 3pm and more than half of the day is gone, and erm ... my only day off during the week, and we did just the shopping for example, and that's it", says GM (Para 13). For most, time anxiety was also accompanied by fear of ageing, of not achieving objectives and of meaninglessness. Contrary to Michelson's (1988) argument that women experience more time related tension and stress than men, a higher number of male responses (7 vs. 2) in the qualitative study were coded under the time anxiety theme, and there was a zero correlation between gender and time anxiety in the second study.

It seems that the experience of time anxiety may be greatly affected by an internalisation of clock time. Young children appear to lack feelings of time anxiety or urgency. To a child time is infinite, flexible and negotiable. Clock time, on the other hand, is characterised by invariance, precision and inevitability. It cannot be turned back. Once the clock is internalised, it inevitability starts ruling the internal world with time anxiety being a price tag attached to the time that is lost (because what is lost is gone forever).

Temporal experiences are not only a matter of academic interest. Experiences and conceptualisations of these experiences can influence actions. If one thinks that time is absolute and finite, one may be more careful about spending it. If one perceives time as flying, one may join in the race, always accelerating in an attempt to catch up. AG comments: “You know, obviously when you think ‘clocks’ you think ‘flight’” (Para 192)”. She is also incredibly busy – working as a full-time lecturer during the week, as a nurse at weekends, having many social interests and striving to be an attentive mother. If one believes time to be relative, one may think that it is in our power to stretch or condense it. We may be able to stretch our time by choosing our mood and the state of mind. Certain situations, such as the state of flow, can affect our perception of time duration. If one thinks that time is no more than a container, one assumes responsibility for filling it. Experience of time anxiety can result in several responses. Mild anxiety may motivate one to take actions to modify the situation. A possible response to an overwhelming feeling of time anxiety, on the other hand, is to freeze and give up, because a belief that anything can be done is lost. An overpowering feeling of time anxiety is likely to demotivate the individual. Needless to say, this helps little to modify the causes of time anxiety. Data shows that the same individuals who report anxiety also talk of time wasting and express dissatisfaction with their time use. GM, for instance, for whom time anxiety is a very dominant experience, feels dissatisfied with his time and his life, and at the same time appears helpless to change the situation.

Our brief venture into understanding participants' experiences of time use and time anxiety with the help of qualitative data reveals a multiplicity of descriptions and metaphors, emphasising the importance of the subjective experience of time use. Experience of time use can have an effect on people's decision-making, behaviour and satisfaction, which is why it is so essential that we take it into account. Subjective time has suffered from the "Cinderella syndrome" for far too long. This is not justifiable considering that we cannot even claim with any certainty that ontological time exists. Without getting involved in philosophical speculations, this work indicates that subjective time deserves more respect. So in the absence of other ways of determining the value of objective and subjective time, the pragmatic approach, i.e. the effect that these two concepts of time have on ordinary people, indicates that subjective time has to be taken seriously.

7.2. Understanding satisfaction with time use

Exploring the major research questions "*1.2. What factors contribute to satisfaction with time use?*", the first study revealed ten super-ordinate themes contributing to satisfaction with time use: life goals and worthwhile activities, liking what one does, balance and variety of activities, prioritisation and acceptance of limits, time management mechanics, responsibility and control, discipline and adaptability, achievement vs. wasting time, reflection/evaluation, time anxiety and perspectives on time. These fell into four overarching categories: Motivation, Organisation, Execution and Evaluation.

Testing hypotheses 1 and 2 in the second study, the principal component factor analysis resulted in the extraction of four factors which explained 41% of the variance in satisfaction with time use. These four factors were: *liking what one does and perceiving it as worthwhile, balance, time anxiety and lack of control*, and *responsibility and achievement*. These factors reflected a number of previously identified super-

ordinate themes, showing a good correspondence with findings from the qualitative study. Thus, for example, Factor 1 *liking what one does and perceiving it as worthwhile* unites liking what one does and life goals and worthwhile activities, the first two super-ordinate themes from the qualitative study. However, it also includes two items originally appearing under the balance and variety of activities super-ordinate theme. The second factor, *balance* closely resembles the third qualitative theme, balance and variety of activities, with the exclusion of items related to variety. The remaining two factors, however, combine the components of qualitative themes in different ways. Thus the third factor, *time anxiety and lack of control* draws on two original qualitative themes: taking responsibility and feeling in control and time anxiety and perspectives on time. The final factor, *responsibility and achievement*, is also based on two qualitative themes: taking responsibility and feeling in control, and achievement vs. wasting time. Overall, six of the original ten super-ordinate themes were upheld by the quantitative analysis (falling into four factors).

The categorical structure of the qualitative study (Motivation, Organisation, Execution, Evaluation) can be argued to be generally upheld by the statistical analysis, with the first factor *liking what one does and perceiving it as worthwhile* falling into the first category of Motivation, the second factor of *balance* falling into the category of Organisation, the fourth factor of *responsibility and achievement* corresponding generally to the category of Execution, and the third factor (*time anxiety and lack of control*) being located in the category of Evaluation. This categorical structure will be addressed further in the chapter in the context of modelling satisfaction with time use.

The discussion that follows will be structured around these four categories, with the major emphasis on the factors that were upheld by both analyses. However, the super-ordinate themes that were not supported by the quantitative study (including prioritisation and acceptance of limits, time management mechanics, discipline and adaptability and reflection/evaluation) will be also discussed.

7.2.1. Motivational factors

One key finding in the present studies concerns the importance of liking one's activities and perceiving them as worthwhile/meaningful for being satisfied with one's time use. This factor accounted for the most variance (12.3%) after rotation in the researcher-devised questionnaire on satisfaction with time use. Whilst the author is not the first to acknowledge the importance of motivational factors for time use (e.g. Arthur and Tait, 2004), the particulars of these results deserve careful consideration.

One part of this finding (the importance of perceiving what one does as worthwhile, meaningful or purposeful) parallels conclusions by a small number of theoreticians and empiricists alike. Thus, for example, Pentland et al (1998) and Lawton et al (1987) believed that meaningfulness of activities contributes to explaining the relationship between time use and well-being. One of the factors in Wessman's (1973) Temporal Experience Questionnaire is long-term personal direction, signifying a purposeful temporal behaviour. This factor was found to be associated with happiness and elevated mood levels. In the Time Structure Questionnaire (Bond & Feather, 1988), a sense of purpose emerged as the main correlate with a number of outcome variables, including a sense of purpose in life, global self esteem, anxiety, health, and study habits. A sense of purpose was thus considered to be the most important factor of their scale.

Doing something that matters seems to make all the difference to motivation for engaging in activities. Meaninglessness is disabling, when there is no sense of direction one seems to drift through life. PB comments: "Well, I have to say erm ... (laughs) I have never really known what I have wanted in life" (Para 52). He is dissatisfied with his time, although objectively he seems to have a lot of it on his hands. He is dissatisfied with his work, relationships and life in general. On the other hand, participants talk about things that they find worthwhile with passion, and there is a real sense of engagement coming from their discourse. For example JT2, a disabled woman who is doing research on disability says:

I am very interested in people and services. Erm ... and I want to make things better, which is a very basic sweeping statement. But in my own little way that is what I intend to do. So I think that what I do is very relevant not just for me personally, but for people who are discriminated against. It is socially relevant. And personally relevant, yes (JT2, Para 89).

However, if meaningfulness or purposefulness of activities was previously identified as one of the time use factors, Factor 1 ascertains that liking and variety of activities are also crucial. Fireman JA can't wait to go back to work after his summer leave. Psychology professor BF can easily work for 10-12 hours without a break, but she similarly enjoys spending time with her children. Significantly, liking is not only something left for leisure time; it can also be integrated into work schedules. For example RP infuses liking and pleasure into all aspects of her life: "I like my work. I like my colleagues. I like what I do. Even if I don't like it I find ways to make it pleasant" (Para 50). Even though liking one's activities is mentioned in some popular books on time management (e.g. Black & Bailey, 2006), the academic literature on time use is silent about the importance of liking one's activities for satisfaction with time use, with the exception of theoretical remarks made by Pentland et al (1998) and Lawton et al (1987).

A look into motivational theories allows us to get a coherent picture of the processes underlying the components of the *liking what one does and perceiving it as worthwhile* factor. The extrinsic-intrinsic motivation continuum postulates the existence of intrinsic motivation and four subtypes of extrinsic motivation, namely integrated, identified, introjected and external (Brown & Ryan, 2004; Ryan, & Deci, 2000). Integrated regulation means people do something because they fully subscribe to the values underlying their behaviour, which have become a part of themselves. Identified regulation means they do something because they can see why it is important (even though they might not enjoy it). Introjected regulation is based on self-control, acting in order to avoid guilt, while external regulation relates to being driven by outside factors. Although both integrated and identified forms of regulation belong to the extrinsic

continuum, they share many features with intrinsic motivation (e.g. in all three cases it is not necessary to force oneself to engage in activities). Perceiving what one does as worthwhile clearly corresponds to the descriptions of identified (behaviour that is consciously valued and personally important) and integrated (based on full subscription to the values underlying the behaviour) types of motivation. Moreover, liking what one does appears to reflect intrinsic motivation, characterised by activities performed for the sake of themselves.

Furthermore, applying the concept of intrinsic motivation to the first factor provides a plausible explanation for the two variety items pulled into this factor by the principal component analysis. Although variety was originally theorised as a component of the balance and variety of activities super-ordinate theme, it appears appropriate as a component of intrinsic motivation, characterised by the inherent human tendency to seek out novelty and challenges. A similar argument can be offered to explain why a significant number of participants in the qualitative study reported liking to be busy. A number of theoreticians of time use (e.g. Tyrrell, 1995) see busyness as a negative consequence of time crunch, especially when it becomes a feature of leisure schedules. Many interviewees, however, expressed views that were incompatible with such an assertion. It is suggested that busyness might be intrinsically stimulating, at least up to a certain point, through presenting one with an opportunity to engage in a wider variety of activities. Freedman and Edwards' (1988) experimental findings of an inverted-U relationship between time pressure and performance offer an explanation as to why it may become counterproductive beyond a certain point. They found that too high pressure disadvantaged the performance of students who were asked to solve a puzzle. Chikszentmihaly's (1992) notion of flow also relies on matching a high level of challenge with an appropriate level of skill. Busyness may thus be positively challenging, albeit only up to a certain point where a person's skills (of multitasking, for example) can no longer be a match for the challenge.

According to Sheldon (1994), goals that are based on intrinsic, integrated and identified motivation are more self-concordant, or consistent with our fundamental psychological needs (Ryan and Dec, 2000). Moreover, intrinsic, as well as integrated and identified sub-types of extrinsic motivation are associated with higher well-being and sustained efforts in goal achievement (Sheldon, 1994). In light of this model, findings from both studies suggest that basing our use of time on the types of motivation mentioned above may result in more personally integrated behaviour contributing to a higher satisfaction with time use.

7.2.1.1. Congruence between life as lived and life goals/values

One of the interview questions in the first study “In what ways, if any, does the way you actually lead your life correspond with your major life goals”? specifically attempted to tap into the sense of congruence between participants’ life goals/values and their lives as lived. This sense of congruence was a consistent feature of the accounts of participants satisfied with their time use, whilst the reverse was true for those who were dissatisfied with it. The emergent themes related to congruence were included under the life goals and worthwhile activities super-ordinate theme, and were then translated into the questionnaire items in the second stage of research. The resulting factor *liking what one does and perceiving it as worthwhile* retained all the items related to the sense of life goals – life congruence. These combined results suggest that the sense of congruence is an important component of the *liking what one does and perceiving it as worthwhile* factor and contributes to our satisfaction with time use through it.

The sense of life goals – life congruence echoes the principle finding of the phenomenological study by Elliot (1997), who concluded that the balance of time is achieved when people *take actions on the right thing*. What “the right thing” is can only be determined on the basis of one’s own values or life goals, whilst “taking action” implies living in accordance with these values or goals. The congruence between the

two is fundamental. Knowing what is important is not sufficient per se, if one finds that they are spending their life on something they don't find worthwhile and don't give time to something they value. For example, high-ranking police official RW regrets not being able to find time for his own health and physical exercise:

Well I am not looking after my health. I must have put on two or three stone in the last two or three years, and that is because of this lifestyle I live. I get up early in the morning, jump into a car, drive to work, sit down in front of a computer all day, get back into a car, drive home, have a heavy dinner, go to bed, and get up in the morning. And the OU stuff. There is no space or time for me to do any physical exercise, which actually I really enjoy, it is a real release to erm ... to work up a sweat and go into activity mode (RW, Para 97).

If what one is doing is tied in to one's underlying life purpose, passions and values time takes on a different meaning. It is no longer an enemy but an assistant, a tool that helps achieve those most important things in one's life. The extract below comes from a respondent who is very conscious about her life goals-life congruence. However, for others it may be a less conscious, more intuitive process.

Make the time choices... I'm very conscious of that, like: 'Here are my goals'. I love my work and I want to have time and space to do the style of work that I like, which is being by myself and writing. And I want time for these important relationships every day. So, that's the guide for how I divide the time (BF, Para 108).

The importance of congruence between life goals/values and the way people lead life draws on a rich heritage of motivation and life goals research. Carl Rogers (1961) claimed that fully functioning humans are those who act in accordance with an "organismic valuing process" occurring within themselves. The philosopher Bradley wrote: "If pleasures and achievements do not have any meaningful relation to one another, they will not give any satisfying overall character to one's life" (in Norman, 1983, p.165). Sheldon & Kasser (2001) saw congruence between higher and lower levels of goals as important, and later introduced an authenticity concept, related to the acting out of the deepest, most whole-hearted goals.

Furthermore, living in accordance with one's goals was found to be associated with aspects of well-being. Oishi *et al's* (1999) value-as-a-moderator model demonstrates that people gain a sense of satisfaction out of activities and domains

congruent with their values. People exhibited more intense positive affect in response to daily events, if these events were coherent with their personal strivings. McGregor and Little (1998) also concluded that integrity (the consistency of one's projects with the core meaning of oneself) was associated with eudaimonic well-being. On the other hand, incongruence between motive disposition and subsequent actions is associated with lower well-being (Brunstein et al, 1998). It is not surprising therefore that the construct of satisfaction with time use that included life goals – life congruence was found to be significantly related to well-being in the current studies.

A possible reason why life goals – life congruence emerged as an essential part of the motivational factor is because according to Sheldon & Kasser (2001) it is associated with more discipline, sustained effort and subsequently higher likelihood of achievement. "Those who managed to select self-concordant goals (i.e., those who pursued goals for intrinsic and identified reasons, more so than for introjected and external reasons) put more sustained effort into those goals, which enabled them to better attain the goals" (p. 41). Achievement of self-concordant goals leads to the largest increase in well-being within the goal-striving cycle.

A number of goals theorists interested in the content of goals (e.g. Boehnke et al, 2001) claim that having certain types of goals (e.g. intrinsic, towards being or non-self focused) is associated with a higher level of well-being. A systematic analysis of participants' life goals in comparison with their reported level of well-being did not provide support for this assumption. Even some of the material goals (money, material goods, pleasures or early retirement) were brought up by interviewees who judged themselves as very happy. On the other hand, life goals – life congruence was strongly associated with their well-being (with the exception of two cases) in the first study. These results indicate that how well one is pursuing one's goals may be more important for well-being than what particular types of goals are being pursued.

The above discussion suggests that the sense of congruence between one's fundamental life goals/values and life as lived should be seen as an important contributor to motivation and satisfaction with time use. A significant number of studies and theories provide support and explanation for why this sense of congruence forms such a vital part of our motivation. It is surprising, however, that the temporal and goal-striving cycles are rarely considered together, which can be seen as a contribution of the current thesis to the literature on time use.

7.2.2. Organisational factors

Whilst work-life balance is a familiar notion in modern life, the factor of *balance* has not previously made its way to time use questionnaires. Although balance was a focal research question for a phenomenological study of Elliot (1997), and was suggested as a potential factor by several scholars (incl. Pentland and McColl, 1999; Pentland et al, 1998, Banks, 1983; Lawton, 1999), it has not been previously identified in quantitative time use research.

The theme of balance arose first in the qualitative study and then emerged as a separate factor in the principle component factor analysis. It accounted for 11.8% variance in the Satisfaction With Time Use Questionnaire, and appeared to be very robust with an alpha of .86 and high loadings of the most items.

A notion of balance is associated with quality and equilibrium. Taken literally, a balanced time use would indicate equal amounts of time devoted to work and non-work/leisure⁸. However, the notion of subjective balance as it is used here is different from the literal meaning. A subjective sense of balance is individual and appears to vary greatly between people. Subjective balance does not imply an equal allocation of time to work and leisure, it does not even necessarily mean investing more time into leisure.

⁸ It must be noted that work and non-work/leisure is not the only classification possible in the discussion of balance. For example, a distinction can be made between free-time and non-free-time activities (Szalai, 1972), or between committed and non-committed time.

Rather, it is based on the subjective sense of equilibrium that is independent from the amounts of time spent on activities. For one person, spending an hour a week on their favourite hobby may be sufficient, while for another an hour a day is not enough. The passages from the qualitative study below provide a good illustration of different ways of achieving a sense of balance.

I mean we will go weeks and not go out because it really doesn't bother me, but when I go out I love it and enjoy it. So he will come home and say 'right I have got a babysitter, lets go out for a meal' 'oh!' and that is lovely because he has created something for me, just for me, that doesn't involve anyone else, just the two of us going out for a meal. And that is really special, and that kind of makes all the other things I do worthwhile (DC, Para 67).

And the other thing is that I make sure that I get proper amounts of holiday. So for the last three years I have gone to Argentina for three weeks with my husband. And the beauty about going over there is that nobody phones me, you know, I get very lazy with my e-mails, I have no alarm clock, and I just go into this oasis erm ... and I become extremely inefficient, and I just sort of switch off. And I think if I didn't do that, then the rest of the year might also be quite different. That is the equivalent of my morning meditation session, you know, on an annual scale (SR, Para 24).

This factor is not prescriptive with regard to objective time allocation, but draws on one's subjective experience. In some respect it parallels the notion of satisfaction with life (Diener et al, 1999), which is a reliable evaluation of something subjective, judged only against one's own standards. Locating the sense of balance in the subjective domain is consistent with the failure of objective time use research to find a significant association between objective time expenditure and outcomes of activities⁹ (Schumann et al; 1985, Robinson, 1982), as well as between the amount of time spent on activities and well-being/enjoyment of time (Lawton et al, 1987; Sullivan, 1996; Gordon and Caltabiano, 1996). Put simply, time spent doing something may have no meaningful relationship to the quality of the output. Therefore, it is subjective rather than objective time allocation that matters.

Haworth (2004) notes that it is impossible to say what a healthy work-life balance is. Indeed, some of the employed women with children in the qualitative study (JT1 and DC) found balance through either reducing their working hours to part-time or

⁹ For example, the amount of time spent studying was not predictive of grades, and the amount of time spent cleaning the house was not predictive of its cleanliness.

working from home (which are frequently the strategies detailed in various work-life balance policies). For DF, who is employed for six hours a week, a sense of balance would be achieved through a full-time position. It is possible that someone would perceive balance in something that another person would find unbalanced. A PhD student, for example, may feel perfectly in balance by finding an empty week during which they can work 12 hours a day. For an outside observer though, such a balance may look like a horrifying experience.

There are three components of this theme, which are worth paying attention to. The first one concerns having some time for oneself on a daily basis. Not only is this a prominent emergent theme in Study 1, item 33 “I take some time for myself on a daily basis” is one of the highest loading items on the balance sub-scale in Study 2. Time for oneself can be spent in either passive or active endeavours. JA goes to gym three or four times a week. BF tries to get to gym every morning before starting work, whilst her husband handles children’s wake up. She concludes: “And that surprisingly makes me feel really, really good. That I’ve started the day doing something that’s good for me and feels like a treat...” (Para 38). GP tries to take one day a week to do what she wants to do, rather than has to do. For SR, time for herself is the time spent meditating every morning, after that she feels ready to face the world and give herself to other people. This is a strong message coming from both studies – participants who are satisfied with their time use make some time for themselves regularly, whilst not having time for oneself is negatively associated with satisfaction with time use. A similar finding, expressed in terms of having enough internal time to process the task psychologically, was reported by Elliot (1997), although her results clearly relate to time use at work situations, while the current studies investigated time use across all life domains.

Once again, the advice to take some time for yourself may not be new. Larsson and Sanne (2005), for example, found that a number of self-help books on time management advocate attending to one’s own needs. What the present studies offer,

however, is empirical support for this wisdom. No matter what, taking the time for oneself is essential for achieving balance. Even when the time is really tight, a short period spent on one's own or in a valued activity facilitates the remaining hours. Taking time for oneself may be about recognising at some point that one is on the verge of collapse and giving oneself permission to stop. Speculatively speaking, the data suggests that feeling right within oneself maximises synchronisation with others and environment. Feeling in balance with oneself helps one achieve balance with time.

The next point concerns the boundary system adopted by an individual. We tend to think that it is vitally important to strictly demarcate the boundaries between work and home, work and leisure, etc. Elliot (1997), for example, finds that setting boundaries is an important feature of being in-balance with one's time. Yet, data from the first study suggests that it does not matter what boundary system an individual chooses, what does matter, is whether he or she is happy with it. In the second study, where item 48 "I am comfortable with the work-life boundaries in my life" was a highly loaded item on the *balance* subscale, items related to specific boundary systems were omitted from the analysis, because of their low inter-correlations. Nipper-Eng (1996) relates these different approaches to boundary management to personality type. Thus, for example, for the integrator, the categories of work and leisure overlap and therefore the boundaries are blurred. The segmentator, on the other hand, approaches them as strictly separate, with everything belonging to either the work or home domain. Brown and Adebayo (2004) note that these strategies may be context-dependant by reporting that employees at higher levels have fewer boundaries between their work and home. However, whilst this might be true for most of the sample in the first study, there were also a substantial number of professionals who preferred to strictly separate their work and home lives.

Finally, the experience of internal conflicts may undermine one's sense of balance with time. DF explicitly connects his dissatisfaction with time use with internal

problems. FT suffers from excessive (in his own words) guilt that prevents him from taking time off work and achieving balance. At the beginning of the interview PB tries to appear fully self-sufficient, stating “you know I haven’t got time for a girlfriend”. He presents his lack of a relationship as a problem artificially constructed by others: “I am quite happy. People say to me ‘why haven’t you got a girlfriend’? it is almost like ... there is something wrong with you if you don’t have a partner...I feel that they think a person may need someone to be happy, do you know what I mean? And they think that applies to everybody, they can’t be happy by themselves. Erm ... and I can” (Para 52). However, a careful examination of his discourse reveals a hidden desire for a relationship: “I would actually like to get over that and may be meet somebody”. This unresolved conflict between wanting and not wanting a relationship results in disorganised efforts, lack of balance and time anxiety. QJ is torn between doing things that he likes, like working on the computer, and clocking up his meditation practice, whilst RW can’t decide if he should allow himself to take a break over lunch.

Although there is a wealth of research evidence that holding incompatible sets of values, goal conflict and ambivalence have a detrimental effect on goal achievement and well-being (Sagiv & Schwartz, 2000; Schwartz, 1992; Tetlock, 1986; Emmons, 1986; Emmons, 1991, Sheldon & Kasser, 1995), the importance of (or the lack of) goal conflict for temporal balance and satisfaction with time use has not been previously noted. Yet, it has considerable implications for time use interventions. These findings suggest that it may be hard if not impossible to achieve a sense of balance in allocation of activities without addressing one’s internal problems and conflicts first.

Whilst a balanced approach to organisation of one’s time emerged strongly from both studies, the super-ordinate theme of *prioritisation and acceptance of limits* did not emerge as an independent factor in the quantitative study. It comprised making choices on what to spend one’s time on, taking into account not only urgency and importance of the activity but one’s limits. This was an unexpected finding in the face of some existing

evidence for this factor. Thus, for example, Lofy (2000) concluded that in order to be able to manage time successfully people must set clear priorities. Setting goals and priorities is one of the sub-scales in Macan et al's (1990) Time Management Behaviour Scale (TMBS). Finally, several theoretical and practical models of time management advocate setting priorities as one of the essential stages in the time management process (e.g. Britton and Glynn, 1989; Banks, 1983; Macan et al, 1990). There are several possible explanations for the lack of support for this factor in the second study:

- The questionnaire items related to the *prioritisation and acceptance of limits* theme were poorly worded and thus did not attract appropriate responses;
- Prioritisation and acceptance of limits may be carried out as a part of the first stage in the subjective time use cycle, e.g. by deciding which activities one enjoys and finds worthwhile one simultaneously prioritises them over the other potential activities;
- Prioritising as an activity may be related more to time-management behaviours, and have limited effect on one's subjective satisfaction with time use.

Further research is necessary in order to determine if the *prioritisation and acceptance of limits* factor may be seen as contributing to one's satisfaction with their time use.

Finally, the last of the organisational factors derived from the qualitative study, time management mechanics, was also not upheld by the quantitative study and analysis. It will be discussed next in a separate section.

One of the key findings of the current studies relates to recognition of the importance of subjective *balance* for feeling satisfied with time use. This factor has received little attention in previous time use studies. On the other hand, the *prioritisation and acceptance of limits* factor, also theorised by the researcher as one of the essential elements of temporal organisation, was not upheld by the survey study.

7.2.2.1. To time manage or not to time manage? Time management skills and their importance for satisfaction with time use.

How important are time management skills for being satisfied with time use? This was one of the research questions posed at the beginning of the study. Do the newest electronic organisers, scheduling what you will do at 10 o'clock and what – at 10.15, or a better designed to-do-list really help us to feel better about our time?

The qualitative theme time management mechanics brought together references to various actions and activities aimed at more efficient time utilisation. However, the rather small “size” (in terms of the composite number of statements) of this theme cast doubt on the importance of planning and organisation factors suggested by several subjective time use researchers (including Wessman, 1973; Calabresi and Cohen, 1968; Briton and Tesser, 1991; Bond and Feather, 1988) and by some time management researchers (e.g. Claessens, 2004). Furthermore, the theme itself encompassed a contradiction: interviewees who were satisfied with their time differed on whether they found time management techniques useful or not. A number of participants who considered themselves happy and efficient in time utilisation did not report any time management behaviours. On the basis of the first analysis it was not expected therefore that time management mechanics would be identified as a distinct factor in the second study. This expectation was confirmed.

What are the possible explanations for the relative unimportance of time management practices that was suggested by these results? It is undoubtedly possible that personality differences may be at play here. Williams et al (1995), for example, found that J (judging) types are much better in time management than P (perceptive) types on the MBTI inventory. One's temporal personality type, styles of time use (polychronic versus monochronic) and other character predispositions may also have an effect. This would suggest that *time management mechanics* did not emerge as a separate factor because it is only applicable for some personality types, rather than for

all participants. Alternatively, poor wording of the time management items could account for these results. Taking the results at their face value, however, opens the possibility of challenging the established time management principles. Previous research by Macan and her colleagues has found that time management training had little or no effect on time management behaviours, job satisfaction or performance (Macan, 1994, 1996; Macan et al, 1990). These findings extend her results by suggesting that time management practices per se are of little importance for one's satisfaction with their time use.

These are important findings, taking into the account financial and other resources invested by companies into time management training. If, as Macan suggested, time management training has little or no effect on behaviours and performance, and if engagement in these practices does little to affect how happy one feels about their time, then the whole time management construct may need to be revisited.

Perhaps, the failure of time management training and practices to produce the desired results may be attributed to basing it on the objective understanding of time and thus focusing on the wrong thing – behaviour rather than the psychology of time. The concept of time management, is at least partially, grounded in the objective time use paradigm that treats time as a sum of 24 hours or 1440 minutes in the day without due concern for subjective processes and our actual experience of time. It is interesting, for example, that most existing time management inventories do not include motivation or other factors related to the psychology of time use. Some of the advice given by the books on time management (Larsson & Sanne, 2005) revolves around streamlining tasks (how to do the same task using less time). Considered in the context of this thesis, it appears that following the streamlining advice is likely to increase the feelings of time deepening.

Perhaps it is not surprising that the mechanics of time management are not important for time use satisfaction because these are mainly aimed at increased time use efficiency, not satisfaction as such. In this case, however, the lack of effect of time management programmes on performance is even more discouraging.

Covey et al (1994) and Green and Skinner (2005) note that not all time management is the same and state that in its development time management has gone through four generations in its development. The first was based on reminders and checklists. The second introduced more planning, goal setting and scheduling, aided by paper planners or computers. The third brought in values, long and short-term goals and daily prioritising, mainly via electronic or paper-based organisers. All these three time management generations emphasised efficiency, but were ineffective in their results. The fourth generation is claimed to incorporate the best features of the earlier ones but it also concentrates on identifying what is really important to a person, allocating more time to it and eliminating what is not important (Covey et al; Noon, 1998). This generation of training no longer revolves around creating to-do-lists but talks about finding what is worthwhile: "Another advice is to look for a job you find meaningful and a worthwhile use of one's time and life, thus escaping the sense of wasted time and time shortage" (Larsson & Sanne, 2005, p. 223). There is a potential danger in the fourth generation, however, which is to omit what is enjoyable when focusing on what is important. A fifth generation of time management may be necessary, one that gives priority not only to efficiency and importance, but also to being satisfied with time use and well-being. Early 2006 in Britain saw the beginnings of this new wave with the publication of *Mind Gym - Give Me Time* (Black & Bailey, 2006). Black and Bailey write: "The aim of this new approach is to make us feel good about time, both how much we've got and how we spend it" (p. 1). They further state: "What is worth seeking when it comes to time, is satisfaction. Or even better, time that delights" (p.2). However, although the book does speak about different time personalities and some

techniques that are based on the subjective understanding of time use (e.g. slowing down, feeling in control), there is little differentiation between what is less or more important. There is also little coherence in their approach to time management, which is one of the problems the current thesis aims to readdress.

Even though time management mechanics did not emerge as a predictor of satisfaction with time use, it would be unwise to deny the practical usefulness of some of these skills. Organisation, planning, little (or controlled) TV watching and working from home were the most cited time management skills. Other practices, such as using technology, working to tight deadlines or doing things in advance were also mentioned, although none of these and other examples attracted more than two passages each. Time management strategies appeared to be less important for satisfaction with time use than might have been expected. However, the fifth generation approach should not throw out the baby with the bath water, but should find balance between useful (though not essential) time management techniques based on the objective paradigm, and the approaches based on subjective understanding of time use. In other words, an approach to time use is proposed that places satisfaction on an equal footing with efficiency.

7.2.3. Execution factors

The fourth factor derived by the principle component analysis, *achievement and responsibility*, brought together two large themes from the Execution category: achievement vs. wasting time and taking responsibility and feeling in control. The control component from the latter theme was not included but became a part of the third factor, *time anxiety and lack of control* (discussed in the next section). Although *achievement and responsibility* accounted for the least variance (11%) in the original questionnaire, it has the largest effect on satisfaction with time use in the regression analysis.

When it comes to acting on time-related decisions, participants draw satisfaction with their time use from achievement. Achievement, completion, meeting deadlines and feeling progress were frequent discourses in interviewees' accounts, which were also supported by the survey results. As an emergent theme, achievement was the largest one in the first study, attracting 61 coded instances. Achievement often relates to something tangible, whether it is finishing a chapter in a book one is writing, clearing one's e-mail inbox or crossing out the last item on today's to-do list. For those working on long-term projects, gaining a sense of achievement is sometimes difficult. To compensate, it is important to complete something every day – it may be something very simple like dishes, or a piece of homework with a child.

A question may be raised at this point as to why the author considers achievement to belonging to the subjective aspect of time use, especially since achievement is frequently associated with tangible results? This is because the criteria for achievement are subjectively based. What one may regard as achievement may not be seen as such for another. For instance, some might consider participation in a meeting to be an achievement, whilst for another that would be seen as a complete waste of time: "Whereas, sitting at some of the useless meetings you get in this place where you just listen to people exercising their voice, seemingly for the sake of exercising their own voice, or discussing the banalities of life, then that I really regard as a waste of time" (FT, Para 51).

This subjectivity indicates that an activity has to be perceived as an achievement in order to become so. LB expressed it this way: "The day before yesterday I asked my partner if we could sort the sitting room out, because it was a real ... it was a mess, complete mess, and we are supposed to be decorating in there, we have got like half way around with the wallpaper. And the telly was in the wrong place, there were Becky's clothes everywhere. We had been away for the weekend so generally it was just messy. So we took everything out of that room, and re-arranged everything and put

it back nice and neatly. And I was happy with that, we had done it, because it needed doing” (Para 59).

Achievement seems to be closely linked with task completion, rather than with time periods. Yet, the majority of jobs still operate on the clock rather than the task-orientation principle. Veal (2004) notes that some time before the industrial revolution, the appearance of clocks started to change people’s task-orientation to clock-time orientation. Given the importance of achievement for time use satisfaction, may be the time has come to revert to standards based on the tasks rather than clocks.

Although the factor of achievement can be found in some qualitative studies on time use and also in the motivation and goals literature, neither responsibility nor achievement were previously reported in any statistically based studies on time use. Elliot’s (1997) phenomenological study speaks of a sense of achievement. She writes: “One of the most striking things about this study was that when people were asked about time, they did not talk about time. Instead, they talked about achievement” (p.166). One of the key metaphors identified by Bennett-Woods (2004) relates to the same: “Accomplishment is the central measure of time well spent, and an important source of satisfaction” (p.131).

A prominent goals researcher, Brunstein (1993) would probably agree with the above conclusion. He found that three goal dimensions, namely, commitment to goals, attainability of goals, and perceived progress in goal achievement, play an important role in facilitating a change in well-being. Parallels that can be drawn between finding from the subjective time use studies and from research on goal processes indicate that motivational and goal processes may need to be adopted as an underlying framework for understanding satisfaction with time use.

Achievement walks hand-in-hand with accepting and acknowledging responsibility. Taking responsibility for one’s time means adopting a proactive rather than reactive attitude in relation to it, preventing oneself from feeling over stressed.

Atchley quotes a man in his eighties saying: “You become free of time when you realise that time is in you, not you in time” (2001, p. 168). This statement implies taking responsibility for time, rather than allowing it to run one’s life.

Taking responsibility over their time gives individuals the tools to overcome the experience of time anxiety, through establishing some control over their own lives. In deadline situations responsibility may manifest itself in the following example: “Well I try and stop myself and think ‘Stop thinking like that, what are your priorities? Do this, do that and that. Can that wait until tomorrow? Yes it can, nobody is going to die if that waits until tomorrow’ and get myself sorted out like that” (JT2, Para 33). Time anxiety is hard to effect by societal changes because it originates in human minds and does not have an independent existence, thus we need internal tools to counteract its influence¹⁰. Responsibility also assists in exercising assertiveness, saying “No” to people and things when it is necessary. A responsible person knows their abilities, limitations and strengths and through this knowledge can assert influence over time. JH comments: “You know, nobody is responsible for my time other than myself, and in that I feel well in control of the situation” (Para 75).

Going back to the surprising discovery that *prioritisation and acceptance of limits* did not emerge as a separate factor, it was already noted that perhaps some of its elements can be found in determining which activities are worthwhile. It can also be suggested that the other elements of prioritisation can be accounted for by assuming responsibility over time. Thus, for example, item no 4 “I often check if I am making the best use of my time”, with the highest loading on *achievement and responsibility*, appears to tap into both responsibility and prioritisation of activities.

Another original super-ordinate theme in the Execution category was *discipline and flexibility*, concerned with “getting on with it” and acting on priorities on the one

¹⁰ It can be argued, however, that the anxiety is a response to internalised society’s expectation. For example, one may be anxious about a full e-mail inbox, because he or she is conscious that people expect a response within 24 hours.

hand, and about being flexible and adapting to the circumstances on the other. Whilst discipline is a commonly valued aspect of time management, flexibility in time organisation would equate to setting oneself more flexible deadlines, allowing oneself to follow back-up (rather than the main) plans, and choosing activities taking into account one's state of mind. Despite both Calabresi and Cohen (1968) and Wessman (1973) emphasising adaptive flexibility in their perceived time use inventories, it was not supported by the principal component analysis. The researcher believes, however, that this conclusion may be due to the wording of the questionnaire.

The *achievement and responsibility* factor emerged as one of the core contributors to satisfaction with time use. Despite some similarities between life goals theories and these findings on time use, neither responsibility nor achievement have previously been reported in quantitative studies of time use nor included in any of the perceived time use scales. The *discipline and adaptability* theme, on the other hand, was not upheld by the second study.

7.2.4. Evaluation factors

Although time anxiety has been discussed already in the context of experiences associated with using time, it will now be considered as a factor contributing to satisfaction (or, to be more precise, dissatisfaction) with time use. Factor three united time anxiety with lack of control. It reflects a sense of panic with regard to time, feeling overwhelmed, worried, and even guilty, and a general perception of helplessness. In its extreme, the factor is exemplified by the following statement: "I am not ... going back to one of your earlier questions actually; am I in control of time? I am not because ... I am a victim if you like, of time. I don't feel that I am in control" (RW, Para 117).

Both of the elements in this factor were identified by earlier research. For example, Calabresi and Cohen (1968) found evidence for a time anxiety factor; Wessman (1973) extracted the immediate time pressure factor (which also includes lack

of control).. Perceived control over time (or lack of it) has a large empirical base, from Lofy's (2000) qualitative conclusions through to Macan et al (1990, 1994, 1996) finding perceived control over time to be a key to time management behaviours (see also Britton and Tesser, 1991; Hafstrom and Paynter, 1991; Gordon and Caltabiano, 1996; Adams and Jex, 1999). In European well-being research Warr (1999) identified opportunity for control as one of the keys to well-being at work.

A number of work-life balance researchers (e.g. Tausig and Fenwick, 2001) claim that perceived control over time is a key factor in achieving this balance. Especially being able to decide on one's working time (so-called "flexitime" policies), contribute to reducing time stress. The data from the qualitative study supports this assertion. Employees who were able to determine their working hours (especially those in academia) generally felt more in control over their time than those working fixed schedules. Flexitime working can potentially lead to overworking, however, unless one manages to create balance in their time use and is able to assert personal responsibility.

Whilst the data from both studies is silent on the objective time expenditure of participants, time anxiety appears to be a real phenomenon, negatively contributing to satisfaction with time use. There might be several explanations for the experience of time anxiety. It may be that time anxiety arises from the gradual internalisation of the clock. It may be a psychological response to the speeding up of the world and processes. It is conceivable that it results from fragmentation and rapid changes from one activity to another, or even lack of coherence between activities one is engaged in. Finally, although this list is by no means exhaustive, time anxiety may be a manifestation of perceived meaninglessness of life, a realisation that one's life may be going in a direction that doesn't make sense.

The final super-ordinate theme of reflection, evaluation referred to being able to reflect on one's time and being satisfied or dissatisfied with one's time use. Although brought up by the participants in the first study, it was not identified as a factor in the

second one. This conclusion was expected on the basis of very limited empirical support (Lofy, 2000) and a small number of responses falling into this theme. Moreover, the item related to satisfaction to time use was not entered into factor analysis, because of using it as a dependent variable in multiple regression analysis. Nevertheless, some elements of this theme can be found in the *anxiety and lack of control* factor, as well as in the first factor: *liking what one does and perceiving it as worthwhile*.

In conclusion, empirical support for the evaluation factors *time anxiety and lack of control* and *reflection, evaluation* was found to be consistent with the previous literature on the subject.

7.2.4.1. Satisfaction with time use and locus of control

The review of time use literature in Chapter 2 suggested a theoretical possibility that the constructs of satisfaction with time use and locus of control may be related. Research question no 1.5. "*What is the relationship between satisfaction with time use and locus of control*"? gave rise to hypothesis 4. No significant correlation was established between a single-item measure of satisfaction with time use and external locus of control. The remaining three correlations were low, from 0.19 and not exceeding 0.34. Although these correlations are statistically significant, their levels suggest that a relationship cannot be established.

Scarce empirical findings on the relationship between locus of control and time use (e.g. Austin, 1988; Hafstrom and Paynter, 1991; Feather and Bond study, 1994) provide an encouraging but inconsistent picture. The results of the quantitative study add to this confusion. They suggest that despite perceived control over time playing an important role in satisfaction with time use, locus of control is only poorly associated with time use satisfaction. Taking the results at face value, it is possible that for some people having an externally imposed schedule may motivate them to work more effectively and help them organise their time, while for others this would seem like a

constraint. Thus a personality factor may have affected the outcome. The other highly plausible explanation relates to the quality of the scales used to measure locus of control. The reliability analysis has shown alpha coefficient to be .33 and .47 for the external and internal dimensions, which is not acceptable. The results of the correlation procedure can therefore not be trusted, leaving this question open for further research.

7.3. Modelling satisfaction with time use

The combined results of both studies suggest a working model of satisfaction with time use presented in Figure 5. It shows the interactions between different stages in the process of time use and outlines the factors comprising each of these stages. The factors that are in bold have been replicated with a larger sample, and are, therefore, emphasised as carrying significantly more weight than others. The reason the remaining themes are still included in the model is because this allows us to graphically represent the results from both studies. Moreover, as there exists some literature to support at least three of those themes, there is still a possibility that a better operationalisation of these themes may attract empirical validation.

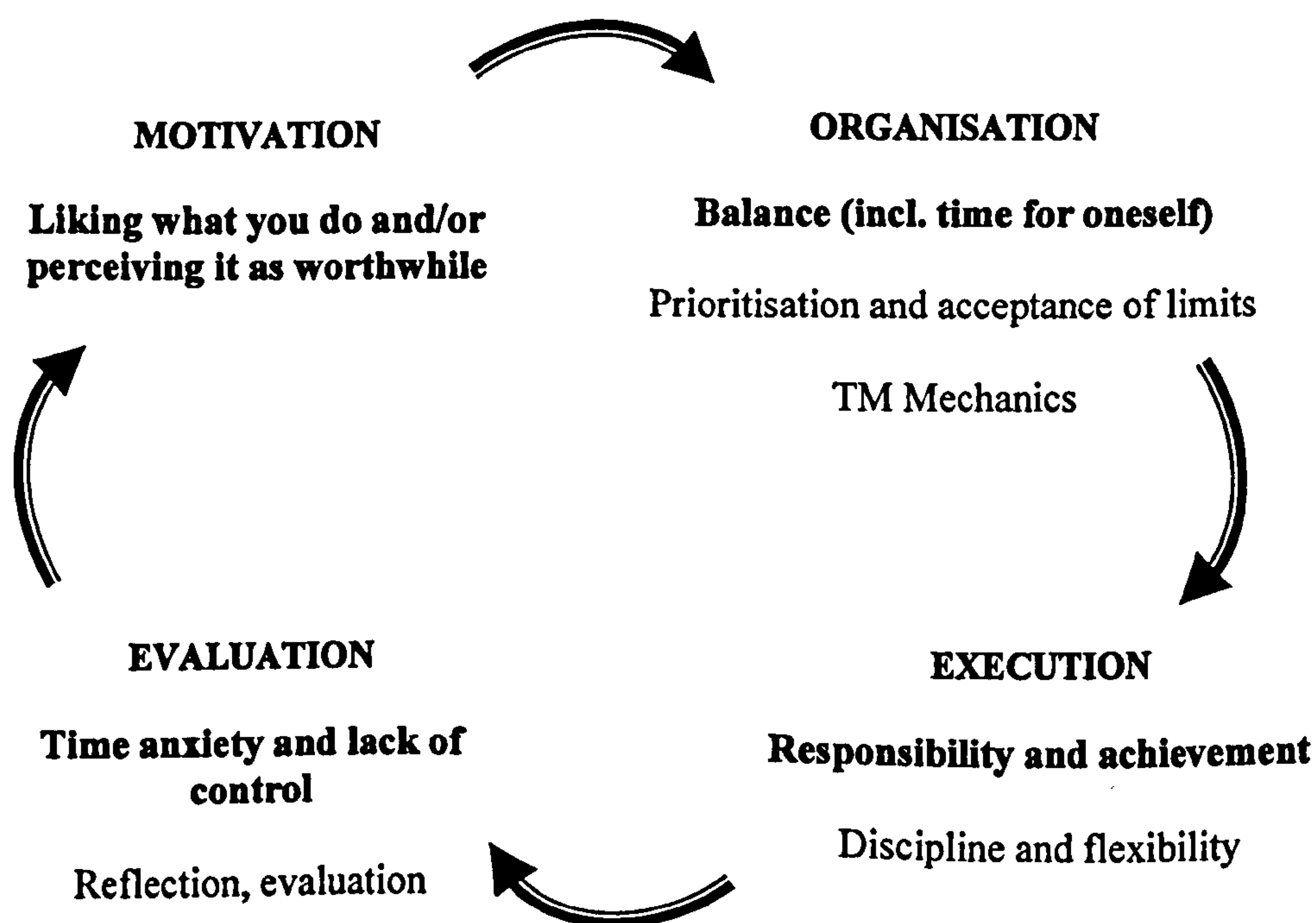


Figure 5: Satisfaction with time use

A four part categorical structure suggested appears to correspond well to a sequential model of action processes proposed by Heckhausen (1991) and Gollwitzer (1990), who distinguish between pre-decision, pre-actional, actional, and post-actional stages. If most previous time management models focused on one or two stages of the temporal process (usually Organisation and Execution), the suggested model of satisfaction with time use opens up different dimensions of the temporal cycle, starting with the stage of motivation. Motivation (or a pre-decision stage) influences the way we approach our organisation of time (which can be seen as a pre-actional stage), which in turn influences Execution (which is the stage during which we execute actions). The cycle ends with evaluation of the temporal process (a post-actional stage) that has an effect on motivation. For instance, experiencing time anxiety may give one a cue to reconsider the choices one has made, to identify what is important for oneself.

Whilst the position of the majority of the identified factors in their corresponding categories seems logical, the positioning of time anxiety in evaluation may require additional clarification. According to Carver and Scheier's (1990) self-regulation model, when people move towards goals, they manifest the functions of a negative feedback loop. This loop works on the basis of reducing discrepancy between people's current and desired states. However, because this goal monitoring loop largely takes place outside of our awareness, Carver and Scheier suggest that we have another meta-monitoring system to check on the progress of the first loop. Positive and negative affect play an important role in this system. Perceived low rate of progress towards goals gives rise to negative feelings that signal a discrepancy. Time anxiety may be seen as one of those negative feelings when it comes to temporal goal oriented processes. Experiencing time anxiety and lack of control over time gives one a cue that there may be a need to clarify goals, work harder to achieve one's goals, or that one's standards for judging progress need adjusting. This also suggests that time anxiety may be a useful experience, as long as one's reaction to it is constructive (i.e. not engaging in more

leisure, but reconsidering one's goals and increasing the congruence between goals and actions) According to Carver and Scheier (1990), when the rate of progress exceeds one's standards, this may result in slowing down and attending more to intrinsic (what one likes doing) rather than incorporated (worthwhile) goals. When the rate of progress is adequate, however, time anxiety is not triggered, and the evaluation stage may even pass unnoticed. Elliot (1997) notes that when a sense of balance with time is achieved, time ceases being an intrusive force and recedes into the background. The current research extends her argument by saying that when people identify something that they either like or see as worthwhile, they are more likely to organise their time in a manner congruent with their goals, take responsibility for their time and achieve their goals. As a result of this process, a nagging feeling of time anxiety may indeed disappear and get replaced with a feeling of control. Moreover, a productive temporal cycle leads one to being satisfied with their time use, which is associated with well-being and may also be related to creativity, energy and even higher productivity.

The suggested model and the thesis as a whole challenge our dominant perceptions of time as external to ourselves, objectified and symbolised by the clock. They question perceptions of time as linear, as a resource, or as measured in monetary terms. Time in our experience rarely progresses as planned and the actuality of being satisfied with time is largely independent of clocks and calendars, and varies in different circumstances and different frames of mind. The model offered firmly locates time use and our satisfaction with it within human psychology, highlighting why we choose to spend our time in one way or another, how we organise it to feel in balance, what feelings indicate that we are executing it well and what feelings indicate the need for a rearrangement. Without denying the potential usefulness of time management techniques based on the objective paradigm of time, the thesis makes a claim that the subjective time use paradigm offers a more adequate approach to understanding how the time is used by individuals and what makes them satisfied with it.

As highlighted in the previous discussion, many of the factors identified as important for satisfaction with time use by the quantitative study appear under-researched in other quantitative literature. These factors include motivation behind using time, perceived balance in time allocation, taking responsibility for one's time, and the sense of achievement. This can be explained by the fact that many earlier quantitative studies were based on insufficiently developed theories lacking an exploration of some key factors. Although a much better correspondence between the variables in the present study could be observed with previous qualitative findings (e.g. Elliot, 1997; Lofy, 2000; Bennett-Woods, 2004), in the author's view these researchers didn't go far enough to test their results. Clearly, both qualitative and quantitative approaches, when used on their own, can have disadvantages. Their combination, on the other hand, has merit.

It is important to emphasise at this point, however, that the model suggested provides at its best a good starting point for further research. The factors included in the model account only for 40% variance in satisfaction with time use, thus leaving plenty of scope for future validations and discoveries. The researcher's own suggestions for future directions will be considered in the concluding chapter.

7.4. The meaning of well-being/happiness: facets familiar and new

Although largely focused on time use satisfaction and factors contributing to it, the thesis also addressed two other questions, one concerning the meaning of well-being and the other – a possible relationship between well-being and satisfaction with time use. The last two sections of the discussion will be devoted to these questions.

The research question no 2.1, "*What meaning do participants assign to the notion of well-being/happiness*"? was addressed only as a part of the qualitative study, and was not taken to the next stage of research, therefore the discussion that follows will

be limited to the results from the first study only. The lay conceptions of well-being expressed by the participants were categorised into five super-ordinate themes: *state of body and mind*, *situation-related*, *self-actualisation*, *relationships* and *transcendence*. Several researchers (e.g. Thomas and Chambers, 1989; Ryff, 1989b; Magen, 1998; Vitterso et al's, 2003; Westerhof et al, 2001) have carried qualitative studies on the meaning of well-being, summarising their findings through different categorisation systems. In many ways the themes identified in this research (and the emergent themes they incorporate) echo previous findings from qualitative studies on well-being, but can be argued to offer a more comprehensive framework, that also incorporates the categories suggested by others.

On the basis of the findings from the qualitative study and the review of the corresponding research, five categories of well-being can be proposed, reflecting the meaning of well-being as understood by a lay participant. These are visually represented in Figure 6.

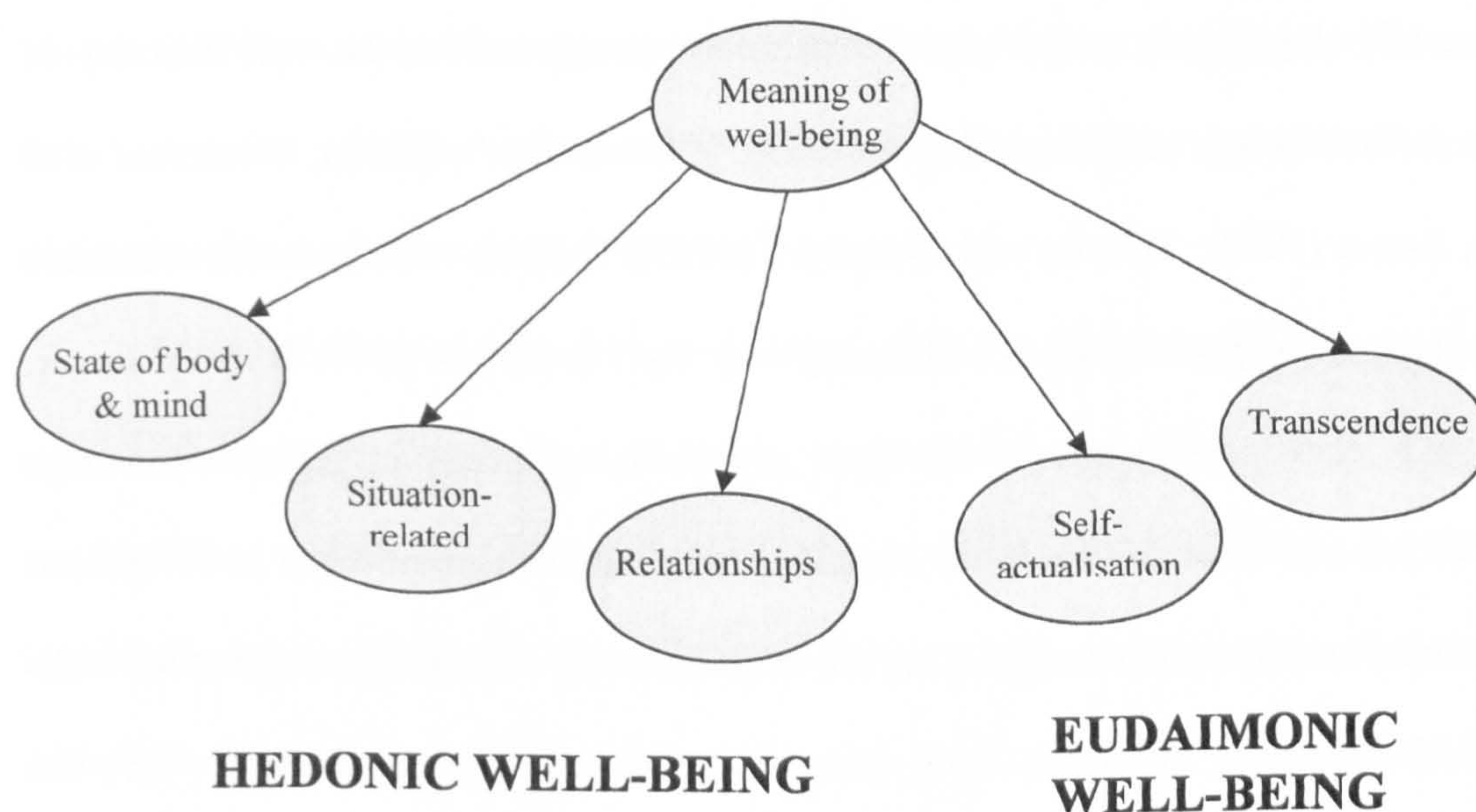


Figure 6: Meanings of well-being

1. State of body and mind.

This category includes many aspects related to self and to internal harmony. It reflects a homeostatic state, in which physical and psychological needs are satisfied. “I need to feel in balance, I think that is probably the most important thing”, says SR (Para 96). In many respects this category is similar to Magen’s (1998) experiences with the self, Vitterso et al’s (2003) being, Westerhof et al’s (2001) intrapersonal aspects, Ryff & Keyes’s (1995) self-acceptance, Sastre’s (1998) physical body and acceptance.

2. Situation-related well-being.

This category incorporates both being satisfied with the present situation and other elements external to the individual or derived from interactions with the external world: pleasure, music, possessions, money. If in the first category, the sense of well-being is derived from one’s internal state, here well-being is dependant upon something that is outside of the respondent. Thomas and Chambers (1989), Ryff (1989b) and especially Magen (1998) also note some elements belonging to this category.

3. Relationships with others.

A sense of belonging or social aspect repeatedly emerged from the vast majority of studies on well-being, including Magen (1998); Vitterso et al’s (2003); Westerhof et al (2001); Sastre (1998); Thomas and Chambers (1989). Positive relations with others are an integral part of psychological well-being (e.g. Ryff & Keyes, 1995; Ryff & Singer, 1998) and relatedness is one of the three psychological needs in self-determination theory (Ryan and Deci, 2000). In the second study relationships emerged as the second largest super-ordinate theme, signifying the importance of human connections for well-being and happiness. Although work and self-actualisation are essential for BF, her family offers another meaning to her well-being:

I enjoy my family a lot; they’re just really important relationships to me. Especially since my two kids are now born I feel like: ‘We’re all here, let’s just grow together’. So there’s a sense of completeness about it. And very full, my life feels very full and very complete. Not in a ‘we’re gonna stop moving and growing’, but it’s like again, we knew we wanted to have two kids. Now they’re both here and we can just watch our garden grow, kind of thing (Para 80).

4. *Self-actualisation*

In the fourth category the focus is on the purposeful activities in which individuals engage as they attempt to realise their goals, aspirations and hopes. For many of the respondents work was a source of self-actualisation. This category reflects what Vitterso et al, (2003) see as becoming, growth (Compton et al, 1996) and personal growth (e.g. Ryff & Keyes, 1995; Ryff & Singer, 1998). Although similar to the first category in the focus on the self, this category is not concerned with maintaining homeostasis, but rather with breaking it. Development can be painful. It requires work and may bring little pleasure in the process. However if it corresponds to one's larger goals and aspirations it can lead to a feeling of a life well-lived and a sense of fulfilment (as understood in the broader, eudaimonic sense of well-being).

5. *Transcendence*

The last category also belongs to the eudaimonic paradigm of well-being. It appears similar to what King and Napa (1998) and Seligman (2002) view as meaning, and Ryff & Keyes (1995) – as purpose in life. Elements of transcendence were identified by Magen (1998) as part of her *experiences with others* category. Judging by the available data, very few people understand well-being as transcendence; nevertheless, the distinctive focus of this category justifies its separateness.

Much of the third chapter was devoted to drawing distinctions between hedonic and eudaimonic approaches to well-being. Legitimately, a question can be raised how our identified themes map onto these two broad paradigms. It appears that the themes identified clearly extend the meaning of well-being beyond its traditional definitions. Although *appreciation of what one has* can be paralleled with cognitive satisfaction with life and certain emergent themes (e.g. pleasure, absence of negatives, feeling good about oneself) carry references to positive and negative affect, other themes identified in the study are not present in the range of tools currently used to measure subjective well-being. Elements from several models of eudaimonic well-being, however, including

Ryff & Keyes (1995), Ryff & Singer (1998), Compton et al (1996), Ryan and Deci (2000), King & Napa, 1998), Huta (2003) and Seligman (2003) can be noted in the current structure. For instance both growth and meaning that are prominent in most eudaimonic theories are reflected in *self-actualisation* and *transcendence* in the suggested classification.

The proposed categorisation appears more comprehensive than the majority of previous attempts outlined above. Not only can it incorporate themes and categories offered by other qualitative researchers, but it seems broad enough to accommodate most elements of well-being, suggested by the proponents of the eudaimonic paradigm. This is not to suggest that all of these elements are essential for the well-being of each individual. Rather, it appears that well-being has a different meaning for different people.

The development of the well-being classification can have implications for measuring and assessing well-being. Perhaps, rather than measuring well-being via generic scales that do not differentiate between the meanings individuals ascribe to it, or via questionnaires that imply that well-being is a combination of a particular fixed number of elements, we could first establish what a particular individual means by well-being, and then assess their well-being using a scale appropriate to their own definition.

7.7. Satisfaction with time use and well-being: the nature of the relationship

The key issue of interest for this PhD was formulated through two research questions:

2.2. Is there a relationship between satisfaction with time use and well-being?

2.3. What is the relationship between satisfaction with time use and well-being?

The qualitative analysis suggested the presence of a relationship between satisfaction with time use and well-being. From the first study, three emergent themes were identified: relationship expressed in positive terms, in negative terms, and time use as the means to an end. The relationship between these constructs was reflected in hypothesis 3 and tested in the second study. Although the hypothesis was fully supported, two somewhat different patterns of correlation emerged when satisfaction with time use was measured through a single-item scale, or as the composite scores of factors contributing to it. The correlations of the composite score are consistently higher than the correlations of the single-item measure, suggesting that the former is a more reliable indicator for the purposes of a relationship with well-being.

Analysing the patterns of correlations between satisfaction with time use and well-being, the highest correlations were observed between satisfaction with time use and satisfaction with life and sense of coherence (in the region of .6 for the composite score of time use satisfaction). Correlations between satisfaction with time use and positive and negative affect were also significant, approaching .5. These correlations are sufficiently substantial to conclude the presence of a relationship. Although a correlation does not imply causation, it is possible that satisfaction with time use may explain a percentage of variance in life satisfaction.

The theoretical possibility of a relationship between satisfaction with time use and sense of coherence raised in chapter 3 has been confirmed by the analysis. SOC is a global orientation indicating the extent to which a person has confidence that internal and external environments are predictable and there is a high probability that life situations will work out as well as can be expected. The relationship between sense of coherence and satisfaction with time use indicates that certain developed personality characteristics and attitudes may play a role in one's relationship with time. Although, once again, it is not possible to discern causality from a correlational analysis, it is likely that SOC influences one's satisfaction with time use.

The findings confirm the conclusions reached by Lawton et al (1987) and Pentland et al (1998), who were the first to demonstrate that satisfaction with time use was related to well-being. These results also help to explain the counterintuitive findings of objective time use researchers who found no relationship between time spent in various activities and well-being (e.g. Zuzanek and Box, 1988; Lawton, 1999). When evaluated subjectively, from the position of the actor, satisfaction with time use clearly shows a strong relationship with well-being. However, when time use is approached from the impersonal perspective of the clock, the relationship loses its significance, as the constructs in this relationship are located in two different spheres – internal (well-being) and external (time budget). It is also important to note that all the measures used in the study are global rather than one of them being momentary (e.g. minute-per-minute time allocation). This means that the constructs were commensurate.

On the relationship between satisfaction with time use and well-being there are still many questions to be answered. Is one predictive of another? Why are the two related? It might be that the way we use time reflects how we use our life. If we are satisfied with time, then it is hardly surprising to find that we also feel quite happy. As discussed earlier in the chapter, time management may soon become a concept of the past because of its excessive focus on efficiency, rather than well-being. Having established the relationship between well-being and time use satisfaction, this thesis proposes that the focus should be broadened to include an explicit emphasis on the latter. If time management aims to maximise our time related to work, time use satisfaction is concerned with time related to life as a whole, in which work, leisure, personal values and objectives all play a role.

CHAPTER 7 SUMMARY:

- The experience of time use was identified through the metaphors and descriptions participants voiced spontaneously in their discussion of time. Several correspond to

metaphors for time previously identified in qualitative and theoretical literature (e.g. Lakoff & Johnson, 1999). However, *time as a container* is a metaphor that does not appear to have been noted before. Time anxiety transpired as the dominant theme for the majority of participants dissatisfied with their time use.

- A good correspondence between qualitative and quantitative findings is reflected in the fact that 6 out of 10 original super-ordinate themes were confirmed by the quantitative analysis. The categorical structure of the temporal process suggested by the first study can also be argued to be generally upheld by the statistical analysis.
- On the basis of this study it appears that motivational factors have attracted insufficient attention from time use researchers. Previous attempts of time use researchers have tended to focus on the integrated aspects of extrinsic motivation (e.g. finding what one does worthwhile), with less attention paid to intrinsically motivated temporal behaviours and attitudes.
- The sense of congruence between one's fundamental life goals/values and one's life as lived is an important component of the *liking what one does and perceiving it as worthwhile* factor, which was found to contribute to satisfaction with time use. A number of studies and theories provide support and explanation for why this sense of congruence forms such a vital part of our motivation. It is surprising, however, that the temporal and goal-striving cycles have been rarely considered together, which can be seen as a contribution of the current thesis to the literature on time use.
- One of the key findings of the current studies relates to the recognition of the importance of one's subjective temporal *balance* (factor 2) to feeling satisfied with time use. All three important elements of the subjective *balance* factor, including time for oneself, being satisfied with one's work-leisure boundaries and the lack of internal conflicts, were supported by the quantitative research. On the other hand, prioritisation and acceptance of limits, theorised by the researcher as an important element of temporal organisation, was not upheld by the survey study.

- Time management strategies and practices appeared to be less important for satisfaction with time use than could have been expected. It is suggested that to be more effective time management programmes need to focus more on the subjective time use factors and aim towards enhancing well-being and time use satisfaction.
- Achievement and responsibility (factor 4) emerged as one of the core contributors to satisfaction with time use. Despite substantial similarities with life goals theories and qualitative findings on time use, both *responsibility and achievement* have received little attention in quantitative literature on time and were not included in any of the perceived time use scales.
- *Time anxiety and lack of control* (factor 3) is well supported by the previous literature on the subject, although the combination of the components identified here is another contribution of this thesis.
- Despite perceived control over time playing an important role in satisfaction with time use, locus of control is only poorly associated with time use satisfaction (which might be due to personality influences). It is likely, however, that these findings can be explained by the poor reliability of the locus of control scales used.
- A circular model of satisfaction with time use is suggested, which organises the factors contributing to satisfaction with time use in a coherent manner.
- On the basis of findings from the qualitative study and existing literature, five categories of meaning of well-being were proposed: state of body and mind; situation-related well-being; relationships with others; self-actualisation and transcendence.
- The results from the qualitative study indicated the presence of a relationship between satisfaction with time use and well-being. Satisfaction with time use was found to be strongly associated with various aspects of well-being in the second study, including life satisfaction, positive and negative affect and sense of coherence.

CHAPTER 8: CONCLUSIONS AND FURTHER DIRECTIONS

8.1. Summary of findings

The two studies presented in the thesis offer several findings that may be considered a contribution to the literature on subjective time use, satisfaction with time use and the nature of the relationship between time use and well-being.

Firstly, the findings of this thesis suggest that the subjective experience of time use needs to be taken seriously. This point was initially highlighted in the literature review (in which the drawbacks of focusing exclusively on the objective approach to time use were exposed) and then confirmed by both empirical studies. It is argued that one's subjective experience of time can have an effect on decision-making, behaviour and other subjective states. Time anxiety that was the dominant experience for a number of participants was significantly related to their well-being and time use satisfaction.

Secondly, self-reported satisfaction with time use is multidimensional. The two studies presented here proposed four key factors contributing to satisfaction with time use. All were fairly robust and together they accounted for a substantial proportion of variance (46% in the time use questionnaire and 40% of satisfaction with time use). Although addressed in some qualitative literature on time use, three of these factors have attracted little attention from quantitative research. These factors include: *liking what one does and perceiving it as worthwhile*, *balance* in time allocation, and *responsibility and achievement*. The fourth factor, *time anxiety and lack of control*, drew on the previously identified components, but combined them in a novel manner. More specifically, congruence between life goals and the way life is led was found to be a part of the first factor and to play a role in subjective satisfaction with time. It was also established that balance in time allocation is subjective, i.e. different for different individuals, although time for oneself, acceptance of the chosen work-life boundary system and lack of internal conflicts were amongst the shared features.

Literature on time management training has been inconclusive about its effects on the corresponding behaviours and attitudes. The theme of time management mechanics that arose from the qualitative study was not upheld by factor analysis. This suggests that many time management practices may be of less importance for satisfaction with time use than could be expected from the widespread popularity of time management books and programmes. Without necessarily discarding time management techniques based on the objective time use paradigm, it is proposed that subjective time use factors and satisfaction with time use need to be given more attention.

Fourthly, the cyclical model of factors contributing to satisfaction with time use was put forward, based on four stages: Motivation, Organisation, Execution and Evaluation. It offers a coherent framework for representing satisfaction with time use, which can be supported by a feedback-based view of self-regulation (Carver and Scheier, 1990). The last stage of the temporal process is characterised by time anxiety and lack of control. It is suggested (and supported by the qualitative study) that time anxiety may act as an indicator of how well people are spending their time, alerting individuals to how congruent one's life is with one's goals and giving one a cue that, perhaps, some choices made may need to be reconsidered.

The review of the literature indicated that whilst there was no association between objective time use and well-being, there might be a relationship between satisfaction with time use and well-being. The results of both studies indicated that satisfaction with time use is related to a number of well-being variables, including satisfaction with life, positive affect, negative affect and sense of coherence. The levels of correlations were respectable, in the region of 0.5 to 0.6. Although the correlational nature of these findings precludes making any causal statements, it seems plausible that satisfaction with time use may have an effect on well-being. This matter deserves further investigation. The correlations between satisfaction with time use and locus of control were very low, possibly due to poor reliability of the scales used.

In addition to the above, the lay conceptions of the meaning of well-being were explored and summarised in five categories: state of body and mind; situation-related well-being; relationships with others; self-actualisation and transcendence. This classification appears more comprehensive than those previously offered.

8.2. Implications of findings

Taken together, the results of both studies suggest that learning about the experience and meaning of time use can provide both practical and theoretical insights into the challenges of everyday living. A significant proportion of the population (about 60%) report experiencing high demands on their time, and the segregation between the time rich and time poor is on the increase (Zuzanek, 2004). As already discussed in the thesis, time management strategies and practices may not be a panacea for time anxiety, most likely because their focus is on changing the behaviour (through learning techniques), rather than on more psychological aspects of time use, and on efficiency rather than satisfaction. In fact, some time management practices, such as performing more activities in less amount of time, may lead to the feelings of time deepening and time intensification. This section describes how the findings from this thesis may be implemented in practice.

It is possible to try to assess the motivation underlying temporal decisions through questionnaires and structured interviews. The findings presented here suggest that it is beneficial for one's satisfaction with time use if one is engaged in activities one either likes doing or, as with regard to the activities one likes less, one really knows why one is doing them. If an individual cannot identify these reasons or if he or she cannot subscribe fully to the values underlying their behaviour, it might be more beneficial for the individual's well-being to reconsider their choice of activities¹¹. An

¹¹ It needs to be recognised, however, that this kind of rational re-adjustment may be very difficult for people with severe circumstantial and/or economic constraints, e.g. the elderly, carers or the unemployed.

appropriate intervention around this stage of the temporal cycle would be to help people recognise their primary goals and values and then identify activities that are congruent with these goals. Time management programmes of the third generation do focus on goal-setting, but without checking for correspondence between higher and lower levels of goals (i.e. between life goals and long-term goals). Time-management of the fourth generation, however, does place an explicit emphasis of what is important (Green and Skinner, 2005), but a less explicit one – on what is enjoyable (this, of course, does not mean that individual trainers or presenters necessarily omit intrinsic motivation from their programmes). The results suggest that engaging in both worthwhile and enjoyable activities is important for satisfaction with time use.

As discussed in the previous chapter, balanced use of time does not mean equal allocation of time to work and leisure, or investing more time into leisure. A sense of balance is subjective and varies greatly between people. Thus an intervention may focus on organising an individual's activities on the basis of what they perceive to be a balanced time allocation, focusing on identifying some time for themselves on a frequent if not daily basis, and on clarifying one's position with regard to work-leisure boundaries. If internal conflicts are identified, psychotherapeutic interventions may be deemed appropriate.

If one is working on a long-term project, it might be difficult for some people to have a sense of achievement as they go along. Breaking a long-term activity into small stages, or completing at least something every day may provide a feeling of achievement and thus contribute to an overall satisfaction with time use. This strategy is frequently used in cognitive-behavioural therapy, but is also advisable for time management. In addition, interventions need to address the matter of responsibility. However, assuming responsibility over one's time may require a shift in one's attitudes that needs to be carefully supported. Once again, this is standard practice in some types

of psychotherapy (e.g. Motivational Interviewing), but to the author's knowledge this has rarely made its way into time management programmes.

Time anxiety does not need to be treated as an enemy. Pacifying anxiety by either catching up with tasks, taking time off or leisure pursuits could obscure the significance of this feeling as an indicator of whether one's life is going in the right direction. Instead, engaging in evaluation of how time is spent may clarify the direction one wants to take.

Furthermore, an exploration of one's relationship with time has the potential to offer a fuller evaluation of one's life, through finding the links and connections between past and present values, current activities and future aspirations. Doing so may facilitate the process of finding a deeper meaning in one's life and working more constructively towards it.

The four factors identified also allow us to step away from advocating generalised time management strategies, which are based on behavioural interventions and frequently follow a "one size fits all" principle, and to develop interventions based on an understanding of an individual's specific temporal needs.

Organisations may also benefit from reconsidering more traditional approaches to time management. Organisations are concerned with how employees use their time, and frequently invest in seminars and workshops to teach them various time management techniques. Both studies in this thesis and other research on time management imply that specific time management techniques, such as diaries, lists, ticks, palm held organisers and software may not necessarily be good value. There needs to be a clearer distinction drawn between old-school time management and the fourth (or even fifth) generation of it. The results suggest that the focus needs to be on enhancing motivation, encouraging (subjective) balance in time use, employees' responsibility over their time and task accomplishment. Appropriate motivation gives energy, promotes creativity and staying on task and may also contribute to productivity.

These studies also challenge the culture of many organisations that encourage overtime, by concluding that the focus needs to be on achievement, rather than time itself, and on providing more scope for employee's autonomous time management. Various researchers (e.g. Schumann et al, 1985; Robinson, 1982) have demonstrated that time expenditure is not predictive of objective outcomes. Thus achievement cannot be identified with clocking a certain number of hours or staying at work longer, yet it is achievement of a task that contributes to being satisfied with time. More flexible work policies already adopted by some organisation may be more in line with these findings.

8.3. Limitations of current research

Whilst the sample size in the first study was adequate for the methodology employed, one limitation was the nature of the sample. Most participants were professionals and a significant number (29%) worked in higher education. Because of their positions, one can assume that they had more freedom with how to use their time than those employed at lower levels. The group was also highly educated: 39% of participants had either Bachelors' or Masters Degrees as their highest qualification, and a further 24% had PhD Degrees. This might affect both their scope for control over their time use, and the ways in which they are able to reflect upon it. On the other hand, this was a purposefully selected group of information rich cases that were likely to have experiences pertinent to the phenomenon under investigation.

Another possible limitation could be the content of the interview schedule. Whilst the researcher interviewed both participants who were satisfied and dissatisfied with their time use, a question can be raised of whether it was legitimate to only explore what makes participants satisfied with their time use, without looking at the experiences of dissatisfaction. In a future study, this could be rectified by including a question such as "What makes you dissatisfied with your time use?" into the interview schedule.

Both the size and the nature of the sample could be a reason for concern in the second study. Even though the participants were randomly selected, the Open University students represent a somewhat specific subset of the population. While the backgrounds and life circumstances of these students are relatively diverse, time use is likely to be an important issue for most because of combining study, work and/or family commitments. They may also be better than the general population in using their time (because they already handle these demands). Furthermore, the 43% of students who chose to return their questionnaires may be even more efficient with their time than the total population sampled. This indicates that the findings from this study should be interpreted with caution as it may not be possible to generalise them beyond the population studied.

Macan et al (1990) notes that the general rule of thumb in scale development is 10 subjects per variable, with a 5:1 ratio being the minimum. Although the time use questionnaire employed in the study was not intended to be developed into a formal scale during the PhD, any subsequent studies developing this line of work would benefit from a larger sample. For factorial research, a sample size of 200, and preferably 300 would be considered more appropriate (Field, 2000). The achieved sample size of 173 remains respectable within the context of a PhD (Comrey & Lee, 1992). Future research should examine the stability of the factors employing a larger sample size.

Another possible limitation of the second study is its reliance on self-report measures. Although self-report measures provide one of the most commonly used ways of studying subjective experience of any phenomenon, they are open to several biases including social desirability, transparency of the items and reliance on memory. Further studies might also benefit from observational or experience sampling research.

A further limitation concerns the reliability of the brief locus of control scales used in the second study (Lumpkin, 1985). The results show alpha reliability of the internal dimension as 0.47, and of the external dimension – 0.33 (or 0.49 for the whole scale). These findings are contrary to the Chronbach's alpha coefficient of 0.68 reported

by Lumpkin (1985) though consistent with the coefficients reported by Sapp and Harrod's (1993). Such low reliability of the scales may have biased the conclusions with respect to the locus of control.

Certain areas closely related to perceived time use and satisfaction with time use were not addressed in this thesis. Amongst these areas are polychronicity and monochronicity in using time (e.g. Kaufman, Lane and Lindquist, 1991), temporal styles of personality (e.g. Francis-Smythe, 1996) and time perspective (e.g. Boniwell & Zimbardo, 2004). These were not considered in depth because of the time and scope limitations of PhD research. Moreover, in studying satisfaction with time use and its relationship with well-being most attention has been paid to subjective or intrapersonal factors (including experiences, motivation, attitudes and feelings). It can be argued that insufficient attention has been devoted to environmental factors (e.g. Warr, 1987), which, as we know, also play a role in well-being (e.g. Haworth, 2004) and can be expected to play a role in one's subjective satisfaction with time use. The reason for this was that very few environmental factors were brought up by the interviewees in the first study. As the design of the second study was based on the findings from the first, these factors did not appear in the final questionnaire. Subsequent research, however, could benefit from an in-depth consideration of the role of environmental factors (e.g. opportunity for control, environmental clarity, opportunity for skill use, social position, money etc) in satisfaction with time use.

Finally, it is worth pointing out that the scope of the project was perhaps overly ambitious. It can be argued that the author adopted a somewhat maximising (Schwartz, 2004) approach to this PhD by embarking on two very large topics and posing research questions, some of which (e.g. *What meaning do participants assign to the notion of well-being/happiness?*) could attract a PhD in themselves. On a positive note, however, the author is now in the position to highlight a number of research questions and directions that could profit from further investigation.

8.4. Further research directions

8.4.1. Studying subjective experience of time use – other factors of importance

It can be concluded that this thesis has shed some light on our understanding of the nature of satisfaction with time use by identifying a number of factors which were previously given little attention in the quantitative literature on time. It is important to point out, however, that these four factors were discerned from the ten super-ordinate themes identified from the interviews with 21 participants. It would be unwise to claim that research based on 21 subjects can locate all the factors that might be relevant for satisfaction with time use. It is not surprising, perhaps, that only 41% of variance in satisfaction with time use was accounted by the resulting four factors, leaving a large percentage of the variance unexplained. The next stage of research could be to determine which of the existing factors previously identified in the literature contribute to this construct and to develop a comprehensive scale incorporating all of the established factors.

This emerging Satisfaction With Time Use Scale could include the four factors identified in the course of the thesis, but may also benefit from the inclusion of items or scales from other existing questionnaires (e.g. Bond and Feather's Time Structure Questionnaire and Macan's Time Management Behaviour Scale) in order to arrive at a more comprehensive factor solution and a coherent model explaining a higher percentage of variance in satisfaction with time use. For instance, the specific scales that might be considered could include: preference for organisation (Macan et al, 1990), time utilisation, personal consistency (Wessman, 1993), persistence and present orientation (Bond and Feather, 1988). Further studies could also aim to test if mechanics (Macan et al, 1990) or structured routine (Bond and Feather, 1988), and time flexibility (Calabresi and Cohen, 1968) factors can be identified as contributing to satisfaction with time use, despite the contrary conclusions reached by this thesis.

Due to the nature of PhD research, there was no explicit longitudinal/life span dimension to the studies. While it is possible that participants were appraising their experiences across a particular time span, it is not clear what that time span was: participants were essentially responding on the basis of their current experience. An interesting area for further research would be to study satisfaction with time use across a prolonged period of life, either retrospectively or longitudinally.

8.4.2. The meaning of well-being

The overview of the qualitative studies in section 3.8 highlighted the problem that we still have a rather rudimentary knowledge of what is meant by well-being. Only a small proportion of the studies employed an emergent or bottom-up approach to data analysis, thus leaving the question of meaning (and subsequently definition) of well-being largely taken for granted. A part of the first study was devoted to the corresponding question of what meaning participants assign to the notion of well-being. The categorisation system presented in section 7.4 unites the results from the first study with the literature available on the subject. However, as the meaning of well-being was only a supplementary research question in the study, these results are based on very limited data. This suggests a need for more research into lay conceptions of well-being. A further study of the meaning of well-being with 1, 000 randomly selected UK participants is now in progress, and the results will be available shortly.

8.4.3. The relationship between time use and well-being

The results indicated a number of correlations between the variable of satisfaction with time use and various aspects of well-being, including satisfaction with life, positive and negative affect and the sense of coherence. Not surprisingly, the composite score of factors contributing to satisfaction with time use was also found to relate to the sense of well-being. However, with the identification of the new factors, it is likely that an even

greater relationship can be established between these variables. For example, if persistence, preference for organisation or any other factor is found to contribute to satisfaction with time use, the relationship between this construct and measures of well-being could increase. Further research is also needed to ascertain if there are causal relationships between these constructs, i.e. whether satisfaction with time use account for some variance in subjective well-being or predicts the sense of well-being.

8.4.4. Methodological directions

The triangulation between the findings from both studies and the literature indicates that the factors of satisfaction with time use identified in the thesis were mostly upheld by the qualitative studies in the field. The quantitative literature, on the other hand, offered little insight into factors such as *liking what one does*, subjective *balance*, *achievement and responsibility*. The author would like to emphasise the importance of a qualitative approach for areas of knowledge (such as subjective time use), where the relevant variables are yet to be identified. The author also trusts that a combination of qualitative and quantitative methodologies in studying time use constitutes a constructive way forward. Qualitative approaches offer a depth of understanding and allow for the identification of previously unknown factors. Quantitative approaches, on the other hand, permit testing of qualitative findings and generalisations well beyond the scope of qualitative research. Even further, the limitations of each of the approaches can to some degree be accounted for by the other. Contrary to Bennett-Woods' (2004) observation that "the positivist approach taken in most organisational time studies, which emphasised clock and calendar time, tends to render time to be too one-dimensional" (p.186), the researcher strongly believes that it is unhelpful to associate the quantitative approach only with studying time use objectively. In fact, as demonstrated by this thesis, the so-called positivist approach can be a useful tool in researching subjective aspects of time use.

8.5. Final remarks

The significant contributions of this thesis to the field of time use can be summarised as follows:

- This work challenges the dominance of time perceived as clock-based, linear or as a resource. Rather, the subjective experience of time use is emphasised, independent of clocks and calendars and varying depending on circumstances and our internal states. This subjective experience of time use (e.g. time anxiety) has been found to relate to satisfaction with time use and well-being.
- The thesis proposes a coherent and comprehensive model of satisfaction with time use. The four factors contributing to satisfaction with time use are identified and positioned within the model. These include: *liking what one does and perceiving it as worthwhile*; *subjective balance*; *responsibility and achievement*; *time anxiety and lack of control*. Three of these factors have received little attention in the previous quantitative studies on time use.
- The findings also question certain time management practices based on the objective paradigm of time (e.g. planning, organising, diaries, making to-do lists, etc) and suggest that strategies based on the subjective factors might be more conducive to feeling satisfied with one's time use.
- Finally, these studies have established the relationship between satisfaction with time use and various aspects of well-being, including satisfaction with life, positive affect, negative affect and sense of coherence.

A major difficulty in studying time and its relationship to well-being lies in the conceptual ambiguity related to the concept of time itself. What is time? Does it have ontological status or is it only a product of a human mind? The journey into subjective representation of time use described in this thesis has brought up a number of pointers

that may be considered useful. Yet, many more questions exist. Perhaps, it is the balance between the objective and subjective aspects of time use that is necessary for satisfaction with it. Further research into time use and well-being would greatly benefit from embracing a multidisciplinary perspective and from focusing on both sides of the temporal coin.

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APPENDIX 1: CALL FOR PARTICIPANTS

Exploring the use of time

Are you generally happy and satisfied with the way you spend your time? Do you feel that you're using it well? If this is the case, I would like to talk to you.

I am a PhD student conducting interviews focused on the use of time, or time management. These interviews are designed to explore what it means to use time well and what makes us satisfied with our time. The participants can be of any age, gender and occupational background.

If you would like to know more about the project and to take part in it, or if you can recommend somebody else who might be interested please contact:

Ilona Boniwell

By phone: 07901 555902

By post: School of Health and Social Welfare
The Open University
Walton Hall
Milton Keynes
MK7 6AA

By e-mail: i.boniwell@open.ac.uk

N.B. Strict confidentiality will be maintained. Interviews will last about 1 hour and can be stopped at any time. Interviews will take place at a time and place convenient to you and by agreement.

Exploring the use of time

Are you generally unhappy and dissatisfied with the way you spend it? Do you feel that you're not using it well? If this is the case, I would like to talk to you.

I am a PhD student conducting interviews focused on the use of time, or time management. These interviews are designed to explore what it means to use time well and what makes us satisfied and dissatisfied with our time. The participants can be of any age, gender and occupational background.

If you would like to know more about the project and to take part in it, or if you can recommend somebody else who might be interested please contact:

Ilona Boniwell

By phone: 07901 555902

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By e-mail: i.boniwell@open.ac.uk

N.B. Strict confidentiality will be maintained. Interviews will last about 1 hour and can be stopped at any time. Interviews will take place at a time and place convenient to you and by agreement.

APPENDIX 2: INTERVIEW SCHEDULE

INTERVIEW SCHEDULE

USE OF TIME, LIFE GOALS & WELL-BEING

- What do you do? How do you usually spend your time?
 - Can you talk me through one day in your life?
- How do you feel about your use of time?
 - Generally how busy would you say you are? How do you feel about that?
 - How much in control of your time do you feel?
- What makes you feel really satisfied with the way you spend your time (on any particular day)?
- How do you know that you are spending your time well?
 - What needs to be there for you to feel that you are spending your time well?
 - Can you talk me through a situation when you feel you are using your time really well? When you feel most in-balance with your time?
 - Precisely what are you aware of during this moment/ in this situation?
 - What helps you to manage your time well? What helps you to get there?
(What time management procedures or techniques do you find particularly useful?)
- How do you feel about the balance between work and leisure in your life?
- What does it mean for you to be happy, or to have a sense of well-being?
 - How satisfied would you say you are with life? How happy would you say you are?
- How does the way you use your time relate to your general sense of well-being or happiness, if at all?

- What are your major goals, what is it that really matters to you in life (What are your major goals in life? What is it that really matters to you in life?)
- In what ways, if any, does the way you actually lead your life correspond with your major life goals?
 - In what ways does your life reflect those goals you identified?
- Is there anything you'd like to add in relation to time, use of time and well-being in your life?

DEMOGRAPHICS

- Finally, may I take a few details about you:
 - How old are you?
 - Are you single, married or do you live with a partner?
 - Do you have children? How many? What ages are they? Do they live with you?
 - Do you have any educational or professional qualifications? What are these?

APPENDIX 3: ETHICS APPROVAL



MEMORANDUM

HUMAN PARTICIPANTS AND MATERIALS ETHICAL COMMITTEE

| | | | |
|-----------------|---|---------------|----------------------|
| FROM: | John Oates, Chair, HPMEC | Email: | J.m.oates@open.ac.uk |
| To: | Ilona Boniwell, SHSW | TEL: | 52395 |
| CC: | | DATE: | 2 February 2004 |
| SUBJECT: | Ethics application: Phenomenological Study of the Experience and Use of Time | Ref: | HPMEC/04/#60/1 |

This memorandum is to confirm that the research protocol for the above-named research project, as submitted on 29/01/2004, is approved by the Open University Human Participants and Materials Ethical Committee.

In due course, the Committee would like to receive an update on the progress of this project, any ethical issues that have arisen and how they have been dealt with.

John Oates
Chair, OU HPMEC

APPENDIX 4: INVITATION AND INFORMATION LETTER, INCLUDING INFORMED CONSENT FORM (STUDY 1)

Phenomenological Study of the Experience and Use of Time

INVITATION AND INFORMATION

Ilona Boniwell
School of Health and Social Welfare
The Open University
Walton Hall, Milton Keynes, MK7 6AA
Tel. (01908)654043

You are being invited to participate in a research study conducted by Ilona Boniwell as a partial requirement towards her doctoral degree at the Open University, UK. Before you decide to take part it is important for you to understand why the research is being done and what it will involve. Please read the following information carefully and take time to decide whether or not you wish to take part.

The main purpose of this inquiry is to learn more about what it means to use time well and what makes people satisfied or less satisfied with their time. You are being asked to take part because you fit the profile of people required for this study.

The study is being conducted in accordance to the guidelines of the British Psychological Society. Participation in this study is voluntary. You may refuse to enter it or may withdraw from it at any time without giving any reason (your interview tapes will be destroyed if you decide to withdraw). The information you provide will be treated as strictly confidential. No real names or identifying details will be used. In any written materials you will be referred to by a two-letter code. There is no financial remuneration for participation in this study.

As a participant in this project you will be asked to take part in an interview during which you will have an opportunity to explore, together with the researcher, your views and feelings about time pressure, time balance, satisfaction with the way you use your time, etc. Participation in the study will take about 1 hour. The session will be audiotaped. The interview tape will be transcribed and analysed by the researcher. The tape and transcription will be used only for the purposes specified above and stored securely accordingly to the Data Protection Act. Upon completion of the study, the tapes will be destroyed. If you wish, a copy of the tape and /or transcription can be made for you.

Possible benefits of the procedure might be the time to reflect on your time patterns, which may lead to an awareness of the role of time in your life and insight into what helps and hinders the way you handle time. Benefits to others may be new insights into what makes people happy with their time that may lead to greater productivity and overall satisfaction with time use.

The risk, discomfort and inconvenience of the above procedure might include:

- Negative emotions and memories surfacing regarding your experiences with time pressure and stress at home and at work
- Creating more time pressure in your day by taking about 1 hour to talk about it.

If you want to talk to someone after the interview about your experiences or emotions please contact the researcher for a list of relevant organisations that can offer appropriate support. Any costs incurred for using these services are the responsibility of individual participants.

If you are unhappy with any part of the research you can make a formal complaint. A copy of the Open University complaint leaflet is enclosed.

Should you have any reactions, questions, or comments with regard to the study, please do not hesitate to ask Ilona Boniwell during the meeting, or contact her afterwards on the address above.

INFORMED CONSENT FORM

Two copies of the Informed Consent Form are provided. Please sign both, indicating that you have read and understood the Information and Invitation letter and agree to participate in this research. Please return one copy to Ilona Boniwell and keep the other for your records.

I confirm that I have read and understood the Invitation and Information letter provided ☐

I confirm that I have been given the opportunity to ask questions and that they have been answered satisfactorily ☐

I understand that the interview will be recorded and that the tapes and transcripts will be used only for the purposes set out in the Invitation and Information letter ☐

I understand that taking part in this study is voluntary and that I m free to withdraw at any time without giving a reason ☐

I agree to take part in this study ☐

Name of Participant_____

Signature_____

Date_____

APPENDIX 5: INVITATION AND INFORMATION LETTER (STUDY 2)

The Open University
Walton Hall
Milton Keynes
MK7 6AA

Institute of Educational Technology

Telephone (01908) 274066
Direct Line (01908) 652422/652423
Voice mail (01908) 659296
E-mail: IET-Surveys@open.ac.uk
Fax (01908) 654173

Dear Student,

I am writing to ask for your help with a study I am carrying out. Its purpose is to learn more about people's use of time. With this in mind I have prepared a questionnaire that asks about your attitudes towards your use of time and your life in general. I would be most grateful if you could spare some time to complete it.

The results of this research may help the Open University to improve its provisions for students. I hope that thinking about your experiences regarding time will also be beneficial to you. The questionnaire should not take long as most questions involve ticking boxes. When completing this questionnaire please answer all the questions. There are no right or wrong responses so feel free to answer as honestly as possible.

By completing and returning this questionnaire you will be assumed to be giving consent to participate in this study. Please be assured that all your answers and comments are confidential. Your personal identifier will only be used to allow me to analyse data by group characteristics. I will not have access to your name or any other personal details. Furthermore, your responses will only be used for research purposes and will not be passed on to a third party. Although the results of the analysis will enter the public domain through publications and conference presentations, your identity would remain anonymous.

Please send in your questionnaire as soon as you have completed it. A pre-paid envelope is enclosed for this purpose. If you have a disability or additional requirement which makes it difficult for you to complete this questionnaire please contact the Survey Office by e-mail (IET-Surveys@open.ac.uk) or telephone using the numbers shown above.

Thank you very much for your help and I wish you every success in your future study.

Yours sincerely

Ilona Boniwell
Full-time Research Student
School of Health and Social Welfare

APPENDIX 6: FINAL QUESTIONNAIRE

Time Survey Questionnaire

Instructions

Please use a ball-point pen to complete the questionnaire. Do not use a fountain or felt tip pen as the ink may be visible on the other side of the page. The questionnaire will be read by a computer scanner, so please fill it in as follows. Place an 'X' in the appropriate box, keeping within the boundary. For example: ☒ If you make a mistake and cross the wrong box, please block out your answer and then cross the correct box. For example: ☒ ☐ ☐ ☐

Part 1

Below are a series of questions about your use of time and your life in general. Using the 1-5 scale below please indicate the extent to which you disagree or agree with each statement. Please put a cross in the box beside each statement in the box that best reflects your view: Please be open and honest in your responses.

1 = Strongly disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree
5 = Strongly agree

| | | | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------|
| (Please cross one box only in each row) | | Strongly disagree | | | | | Strongly agree |
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | I plan my activities from day to day..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2 | I watch a lot of TV..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3 | I am careful not to waste my time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4 | I often check if I am making the best use of my time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5 | I have trouble organising things that I have to do | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6 | I often don't have enough time to accomplish my tasks..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 7 | I use various techniques (e.g. lists, diaries, ticks) to help me manage my time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 8 | I work better under pressure..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 9 | I take responsibility for my time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 10 | I find it easy to organise my time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 11 | I feel time is slipping away through my fingers.. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 12 | Time is what you make of it..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 13 | I rarely procrastinate..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 14 | I rarely worry about time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 15 | I am not good with using time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 16 | I usually feel in control of my time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 17 | My time doesn't seem to belong to me..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 18 | I am quite good at managing the many responsibilities of my daily life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| (Please cross one box only in each row) | | Strongly disagree | | | | Strongly agree |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | 1 | 2 | 3 | 4 | 5 |
| 19 | I tend to do things in advance..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20 | I am inclined to take life as it comes without much planning..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21 | I feel overwhelmed by my responsibilities..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22 | I waste a lot of time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23 | I am often anxious about time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24 | I never write any "to do" lists..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25 | I find it hard to maintain discipline..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26 | Overall, I am satisfied with the way I use my time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27 | There is a lot of variety in my life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28 | I find it easy to adapt to changing circumstances | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29 | I find it hard to distinguish what is important and what is not..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30 | I have strict boundaries between different areas of life (e.g. leisure-work, etc)..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31 | I work too much..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32 | I enjoy being busy..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33 | I take some time for myself on a daily basis... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 34 | Even when I am very involved in doing something, I am aware of a larger picture..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 35 | I feel lost when something unpredictable happens..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 36 | I always know what my priorities are..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37 | I don't separate my work and home life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38 | I have a balance between what I want to do and what I have to do..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 39 | I am often unrealistic about what can or cannot be done within a particular time period..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40 | I feel that different areas of my life are well- balanced..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41 | When I have lots to do, I just get on with it..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42 | I find it difficult to switch from one activity to another..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43 | I tend to do the most important things first..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44 | My life is chaotic..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45 | I stick to my aims even when it gets hard..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 46 | When I decide what to do next I take into account not only what is to be done but also my own mood and frame of mind..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 47 | I am usually accurate in figuring out how long it will take to finish a task..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| (Please cross one box only in each row) | | Strongly disagree | | | | Strongly agree |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | 1 | 2 | 3 | 4 | 5 |
| 48 | I am comfortable with the work-life boundaries in my life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 49 | I feel I have a balance of activities in my life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50 | I never have time for myself..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 51 | When I get really engaged in an activity, I forget anything and everything..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52 | I usually achieve something within each day... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53 | I often find myself in conflict..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54 | I like what I do..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55 | I live my life in accordance with my goals..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56 | I really wish there was more variety in my life... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57 | I often feel that what I do is meaningless..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58 | Days often go by without me having done a thing..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 59 | I often feel guilty about not having done something..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 60 | At this time, I am meeting the goals that I have set for myself..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 61 | If I should die today, I would feel that my life has been worthwhile..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 62 | I feel I am making progress..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 63 | I often question if I have made right decisions.. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 64 | I don't have a good sense of what it is I'm trying to accomplish in life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 65 | I tend to do things to the best of my ability..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 66 | I feel in harmony with myself..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 67 | My daily activities often seem trivial and unimportant to me..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 68 | I have to work longer hours in order to meet deadlines..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 69 | I am not happy with my progress..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 70 | Looking at a typical day in my life, I think that most things I do have some purpose..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Part 2

Here is a series of questions relating to various aspects of our lives. Each question has seven possible answers. Please put a cross in the box under the number which expresses your answer with numbers 1 and 7 being the extreme answers. If the words under 1 are right for you, please cross 1; if the words under 7 are right for you, cross 7. If you feel differently, put a cross in the number which best expresses your feeling. Please cross one box only for each question.

| | | | | | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 1 | Do you have the feeling that you don't really care about what goes on around you? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very often | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very seldom or never |

| | | | | | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------|
| 2 | Has it happened in the past that you were surprised by the behaviour of people whom you thought you knew well? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Never happened | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Always happened |

| | | | | | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------|
| 3 | Has it happened that people whom you counted on disappointed you? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Never happened | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Always happened |

| | | | | | | | | | |
|---|----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|
| 4 | Until now your life has had | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | No clear goals or purpose at all | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very clear goals and purpose |

| | | | | | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 5 | Do you have the feeling that you're being treated unfairly? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very often | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very seldom or never |

| | | | | | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 6 | Do you have the feeling that you are in an unfamiliar situation and don't know what to do? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very often | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very seldom or never |

| | | | | | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|
| 7 | Doing the things you do every day is: | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | A source of deep pleasure and satisfaction | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | A source of pain and boredom |

| | | | | | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 8 | Do you have very mixed-up feelings and ideas? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very often | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very seldom or never |

| | | | | | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 9 | Does it happen that you have feelings inside you would rather not feel? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very often | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very seldom or never |

| | | | | | | | | | |
|----|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------|
| 10 | Many people - even those with a strong character - sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Never | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very often |

| | | | | | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| 11 | When something happened, have you generally found that: | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | You overestimated or underestimated its importance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | You saw things in the right proportion |

| | | | | | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 12 | How often do you have the feeling that there's little meaning in the things you do in daily life? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very often | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very seldom or never |

| | | | | | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 13 | How often do you have feelings that you're not sure you can keep under control? | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | Very often | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Very seldom or never |

Part 3

Below are a series of questions about the way you lead your life. Please indicate the extent to which you disagree or agree with each statement using the 5-point scale.

1 = Strongly disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Strongly agree

| | | | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------|
| (Please cross one box only in each row) | | Strongly disagree | | | | | Strongly agree |
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | When I make plans, I am almost certain that I can make them work..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2 | Getting people to do the right thing depends upon ability; luck has nothing to do with it..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3 | What happens to me is my own doing..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4 | Many of the unhappy things in people's lives are partly due to bad luck..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5 | Getting a job depends mainly on being in the right place at the right time..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6 | Many times I feel that I have little influence over the things that happen to me..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Part 4

Below are five statements about your life with which you may agree or disagree. Using the 1-7 scale below indicate your agreement with each item by putting a cross in the appropriate box. Please be open and honest in your responding.

1 = Strongly disagree 2 = Disagree 3 = Slightly disagree 4 = Neither agree nor disagree
5 = Slightly agree 6 = Agree 7 = Strongly agree

| | | | | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | Strongly disagree | | | | | | Strongly agree |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | In most ways my life is close to my ideal..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | The conditions of my life are excellent..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | I am satisfied with my life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | So far I have gotten the important things I want in life..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | If I could live my life over I would change almost nothing..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Part 5

The following part of the questionnaire consists of a number of words that describe different feelings and emotions. Read each item and then put a cross in the appropriate answer. Indicate to what extent you have felt this way during the past few weeks. (Cross one box only in each row)

| | | | | | | |
|----|-------------------|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | Very slightly or not at all | A little | Moderately | Quite a bit | Extremely |
| 1 | Interested..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Distressed..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Excited..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Upset..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Strong..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Guilty..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Scared..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Hostile..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Enthusiastic..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | Proud..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11 | Irritable..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12 | Alert..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13 | Ashamed..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14 | Inspired..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | Very slightly or not at all | A little | Moderately | Quite a bit | Extremely |
|----|-----------------|-----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 15 | Nervous..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16 | Determined..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17 | Attentive..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18 | Jittery..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19 | Active..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20 | Afraid..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Part 6

Personal Details

1. Are you?

| | | | | | | | | | |
|--------------------------|----------------------------------|--------------------------|---------------------------------|--------------------------|----------------------------------|--------------------------|-----------------------------------|--------------------------|--|
| <input type="checkbox"/> | Married <input type="checkbox"/> | <input type="checkbox"/> | Single <input type="checkbox"/> | <input type="checkbox"/> | Widowed <input type="checkbox"/> | <input type="checkbox"/> | Divorced <input type="checkbox"/> | <input type="checkbox"/> | Living with partner <input type="checkbox"/> |
|--------------------------|----------------------------------|--------------------------|---------------------------------|--------------------------|----------------------------------|--------------------------|-----------------------------------|--------------------------|--|

2. Are you?

| | | |
|--------------------------|---|--------------------------|
| <input type="checkbox"/> | Employed full-time in paid work..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Employed part-time in paid work..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Self employed/freelance..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Doing voluntary work..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Doing other unpaid work..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Permanently unable to work..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Temporarily sick or unable to work..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Retired..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Looking after the home or family..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Taking time out in order to travel..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Due to start a job within the next month..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Unemployed and looking for employment, further study or training.... | <input type="checkbox"/> |
| <input type="checkbox"/> | Unemployed but NOT looking for employment, further study or training..... | <input type="checkbox"/> |
| <input type="checkbox"/> | Doing something else..... | <input type="checkbox"/> |

3. How many children are currently living with you? *(Please write in)*

Do you have any further comments?

Thank you very much for your help. Please return the questionnaire as soon as possible using the reply-paid envelope (To: Survey Office, Institute of Educational Technology, The Open University, Freepost ANG 5175, Milton Keynes MK7 6YR)

APPENDIX 7: ITEM DISTRIBUTION IN THE SATISFACTION WITH TIME USE QUESTIONNAIRE

MOTIVATION

- **Liking what one does**

32. I enjoy being busy

54. I like what I do

- **Life goals and worthwhile activities**

55. I live my life in accordance with my goals

57. I often feel that what I do is meaningless

61. If I should die today, I would feel that my life has been worthwhile

64. I don't have a good sense of what it is I'm trying to accomplish in life

67. My daily activities often seem trivial and unimportant to me

70. Looking at a typical day in my life, I think that most things I do have some purpose

ORGANISATION

- **Balance and variety of activities**

27. There is a lot of variety in my life

30. I have strict boundaries between different areas of life (e.g. leisure-work, etc)

31. I work too much

33. I take some time for myself on a daily basis

37. I don't separate my work and home life

38. I have a balance between what I want to do and what I have to do

40. I feel that different areas of my life are well-balanced

48. I am comfortable with the work-life boundaries in my life

49. I feel I have a balance of activities in my life

50. I never have time for myself

56. I really wish there was more variety in my life

53. I often find myself in conflict

66. I feel in harmony with myself

- **Prioritisation and acceptance of limits**

29. I find it hard to distinguish what is important and what is not

36. I always know what my priorities are

39. I am often unrealistic about what can or cannot be done within a particular time period

43. I tend to do the most important things first

46. When I decide what to do next I take into account not only what is to be done but also my own mood and frame of mind

47. I am usually accurate in figuring out how long it will take to finish a task

- **Time management mechanics**

1. I plan my activities from day to day

2. I watch a lot of TV

5. I have trouble organising things that I have to do

7. I use various techniques (e.g. lists, diaries, ticks) to help me manage my time

8. I work better under pressure

10. I find it easy to organise my time

18. I am quite good at managing the many responsibilities of my daily life

19. I tend to do things in advance

20. I am inclined to take life as it comes without much planning

21. I feel overwhelmed by my responsibilities

24. I never write any “to do” lists

EXECUTION

- **Achievement vs. wasting time**

3. I am careful not to waste my time

6. I often don't have enough time to accomplish my tasks

13. I rarely procrastinate

22. I waste a lot of time

52. I usually achieve something within each day

58. Days often go by without me having done a thing

60. At this time, I am meeting the goals that I have set for myself

62. I feel I am making progress

65. I tend to do things to the best of my ability

68. I have to work longer hours in order to meet deadlines

69. I am not happy with my progress

- **Discipline and adaptability**

25. I find it hard to maintain discipline

28. I find it easy to adapt to changing circumstances

34. Even when I am very involved in doing something, I am aware of a larger picture

35. I feel lost when something unpredictable happens

41. When I have lots to do, I just get on with it

42. I find it difficult to switch from one activity to another

44. My life is chaotic

45. I stick to my aims even when it gets hard

51. When I get really engaged in an activity, I forget anything and everything

- **Taking responsibility and feeling in control**

4. I often check if I am making the best use of my time

- 9. I take responsibility for my time
- 12. Time is what you make of it
- 16. I usually feel in control of my time
- 17. My time doesn't seem to belong to me

EVALUATION

- **Reflection, evaluation**

- 15. I am not good with using time
- 26. Overall, I am satisfied with the way I use my time
- 63. I often question if I have made the right decisions

- **Time anxiety**

- 11. I feel time is slipping away through my fingers
- 14. I rarely worry about time
- 23. I am often anxious about time
- 59. I often feel guilty about not having done something

APPENDIX 8: PROJECT APPROVAL BY THE STUDENT RESEARCH PROJECT PANEL

INTERNAL MEMORANDUM

From: Jill Adams

Ref.: SRPP/Yes

To: Ilona Boniwell

Date: 25 May 20064

Ext: 52224

**Subject: SRPP Application No 2004/231: Satisfaction with time use, life goals and
well-being**

I have now received formal confirmation from the Panel that the above project has been approved.